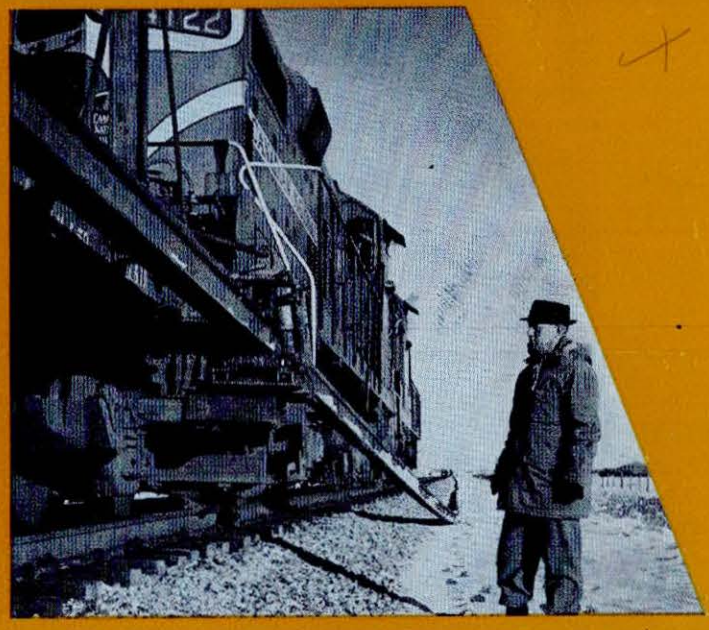
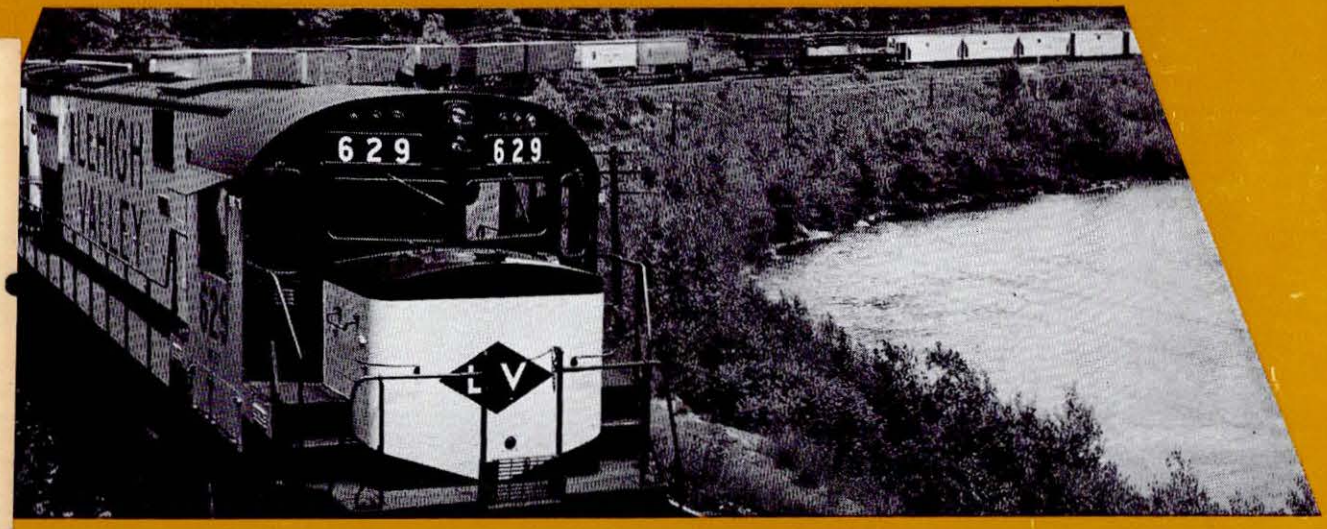
SPECIAL REPORT TO MANAGEMENT

JANUARY 16, 1967

# RAILWAY AGE
## WEEKLY

# '66 REVIEW



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# '67 OUTLOOK

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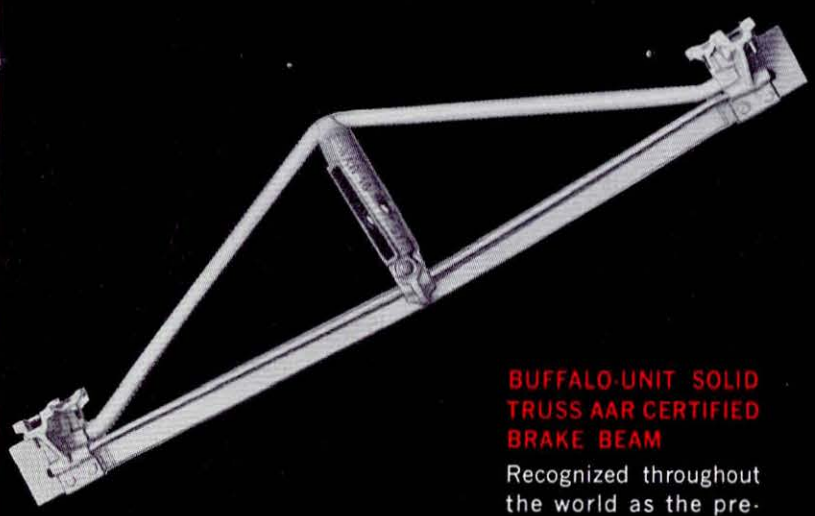

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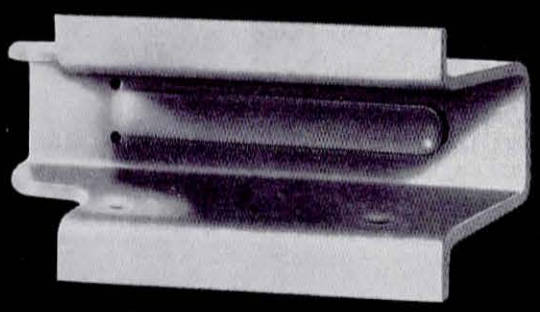

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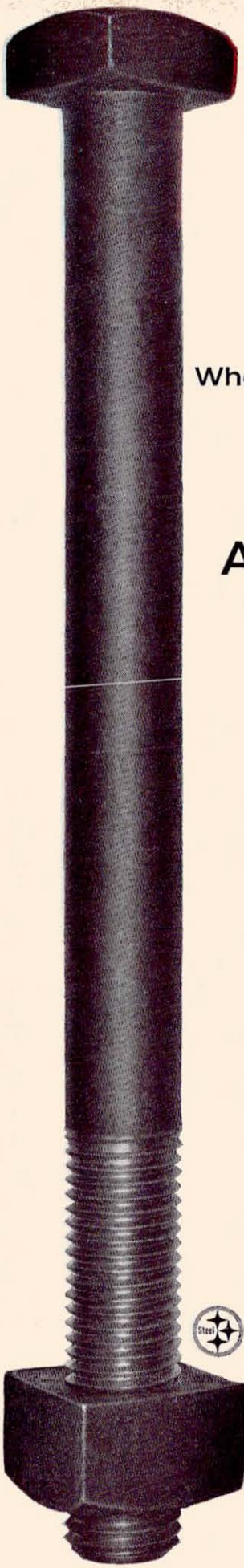

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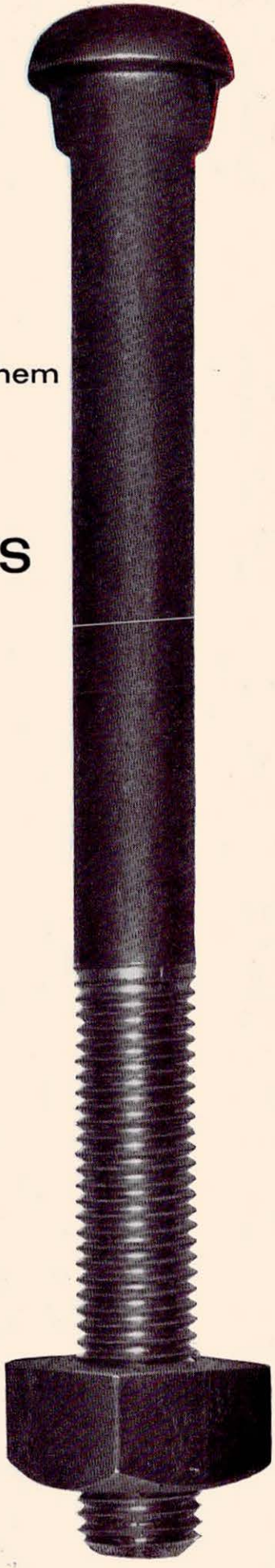

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# RAILWAY AGE

January 16, 1967 • Vol. 162, No. 2


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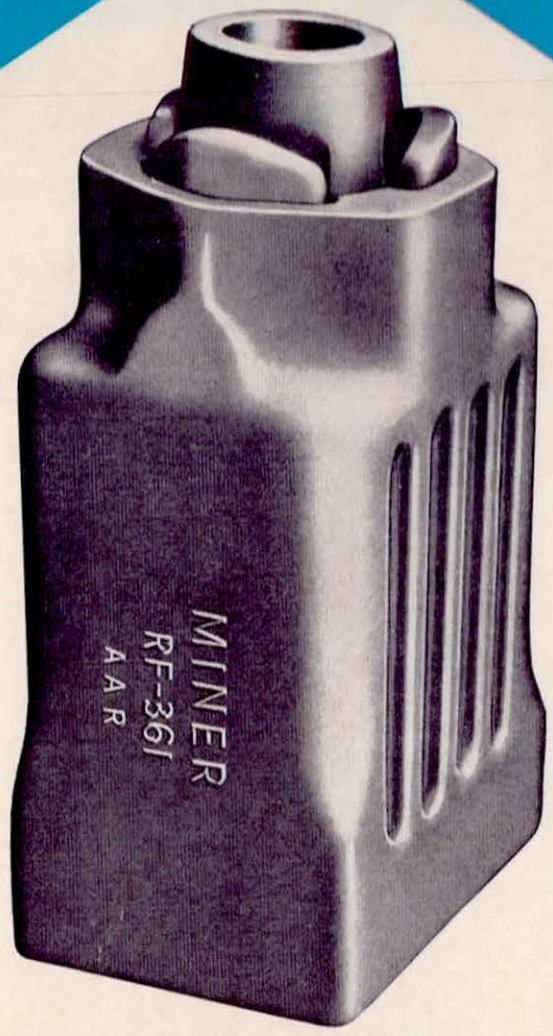


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# SHORT AND SIGNIFICANT

### For C&NW, a $46-million improvement program

Chicago & North Western's property-improvement program will keep going at a high level through 1967. Present plans call for expenditure of $46 million—a figure exceeded only in the spending programs of 1965 and 1966. Says Chairman and President Ben W. Heineman: "Although our '67 capital budget is less than that of last year, it is more than one and one-half times the average annual outlay for the past 10 years." Purchase of new equipment and improvement of existing equipment will account for about $34.5 million. North Western will acquire approximately 1,000 new freight cars, 23 3,600-hp and 3,000-hp diesel-electric locomotives and 16 suburban-service coaches; some 2,800 freight cars will undergo heavy repairs in company shops. Major improvements to fixed plant will include a 100-mile microwave extension and purchase of additional M/W equipment costing more than $1 million.

•

### Canadian unions balk at wage offer

The dispute which touched off a nation-wide rail strike in Canada last summer is headed for arbitration—with a number of unions turning down a wage offer worked out in mediation. The offer—24% over three years, plus extra pay for skilled crafts—was first protested by the Canadian Brotherhood of Railway, Transport and General Workers and later rejected by shop-craft organizations. Next step: Arbitration, which was made compulsory in the legislation which brought an end to last year's walkout.

•

### 1966—A great one for TOFC

The figures are in for piggyback loadings in 1966, and the year was a big one for the record-setting TOFC service. Loadings for the past year up to Dec. 31 totaled 1,162,731 cars carrying 1,912,161 trailers, compared with 1,034,377 cars carrying 1,669,881 trailers in the corresponding period of 1965. The outlook for '67: Continued growth for piggyback and the introduction of some important changes in basic equipment and in methods of loading and unloading.

•

### Grain cars needed? Make a reservation

Rock Island and Frisco are trying to attack grain-car shortages with a combination of car reservations and incentive rates. As of Dec. 30, export grain shippers have been able to make definite reservations for blocks of cars to move on specified dates. As the two railroads put it, "for the first time, the shipper will know when he will get his cars, how many he will get and when his shipment can be expected at destination." Among the key features of the plan are a provision for reservations for eight cars or more, to be made 15 days in advance; an incentive rate, to be termed a "booked" rate, which increases in attractiveness as greater numbers of cars are reserved; elimination of transit, diversion and en-route-weighing arrangements. Cars must be loaded within 24 hours after delivery and must be unloaded within 48 hours after arrival at the port. Under terms of the plan, the railroads will deliver empties to one location—and they must be moved on one bill of lading and on one day from one shipper to one receiver. With the "booked" rate, RI and Frisco are also publishing a "cutback" rate under which a shipper may consolidate single-car movements into a multiple-car movement from a given point to a port. The broad aim of the whole program: To increase car availability by decreasing turn-around time.

# MONDAY MORNING REPORT

**A new look at railroad passenger deficits**

It's no surprise to anyone that a great many rail passenger services lose money. But just how much money? For years the argument has been raging back and forth between those who advocate using the avoidable-cost formula, and those who subscribe to the ICC's fully-distributed-cost formula. Now along comes Stanford Research Institute with a study that says they're both off the mark: The formulas are equally misleading, and the railroads are in fact losing a lot more money than either formula indicates—and they themselves realize.

**The case of the foggy formulas**

Comparing the two formulas is like comparing apples with pears. The Interstate Commerce Commission's yardstick measures a railroad's expenses for passenger operations on a fully distributed basis, including tax accruals and net rents—the ICC's famous Annual Form A. The avoidable cost formula measures how much a railroad is actually out of pocket for maintaining passenger operations—and since the figure will ordinarily be much lower than the figure on the ICC basis, this formula is much beloved of those who say the railroad's passenger losses are exaggerated. But SRI finds them both foggy. "It is true [says SRI] that such fully distributed costs do not reflect the avoidable cost of maintaining passenger service in the short run . . . but over the long run (five to 10 years), it is likely that most of the fully distributed costs could be avoided if passenger operations were discontinued."

**ICC's cost figures called an understatement**

Then comes the big surprise. SRI goes on: "As a matter of fact, one authoritative study [made by the Aeronautical Research Foundation] has even argued that long-run avoidable costs of rail passenger service exceed ICC fully distributed figures—that is, that the ICC fully-distributed cost formula understates rather than overstates the railroad passenger deficit." The rationale for this argument is that in a short-term period, say one or two years, few of the costs of operating passenger services are avoidable in case of abandonment, that over a much longer period—say ten years or more, the number of avoidable costs is demonstrably much higher. And, adds SRI, the ICC's method for allocating joint expenses is at least to some extent arbitrary, and not amenable to precise measurement.

**The passenger picture: Color it gloomy**

The SRI finding is just one of a series of findings—almost all gloomy—in a study sponsored by the Southern Pacific on the future of rail passenger traffic in the West. After analyzing trends in traffic volume, passenger miles, unit costs, speed and technological advances vis-a-vis other modes of transport, SRI can find nothing to support the view that passenger traffic will either have a resurgence, or is worth large capital investment.

**SRI's view of the future slightly overcast?**

The SRI report confines itself to a study of the passenger situation in the West, but many will see implications for the rest of the country as well. In the meantime, does the High-Speed Ground Transportation Program sponsored by the federal government offer any hope? SRI says maybe—but hedges even that grudging concession with many conditions. In the view of many observers an important omission in the SRI study may be the failure to take full account of changes that are coming in other modes of transport, too. The federal government is still reluctant to take on the burden of enormous developmental costs associated with supersonic transport which will drive air costs way up. And there is serious doubt that unrestrained highway building will continue in the 1970's the way it did in the Fifties and Sixties. The SRI people may be right to be gloomy—but they don't tell the whole story.

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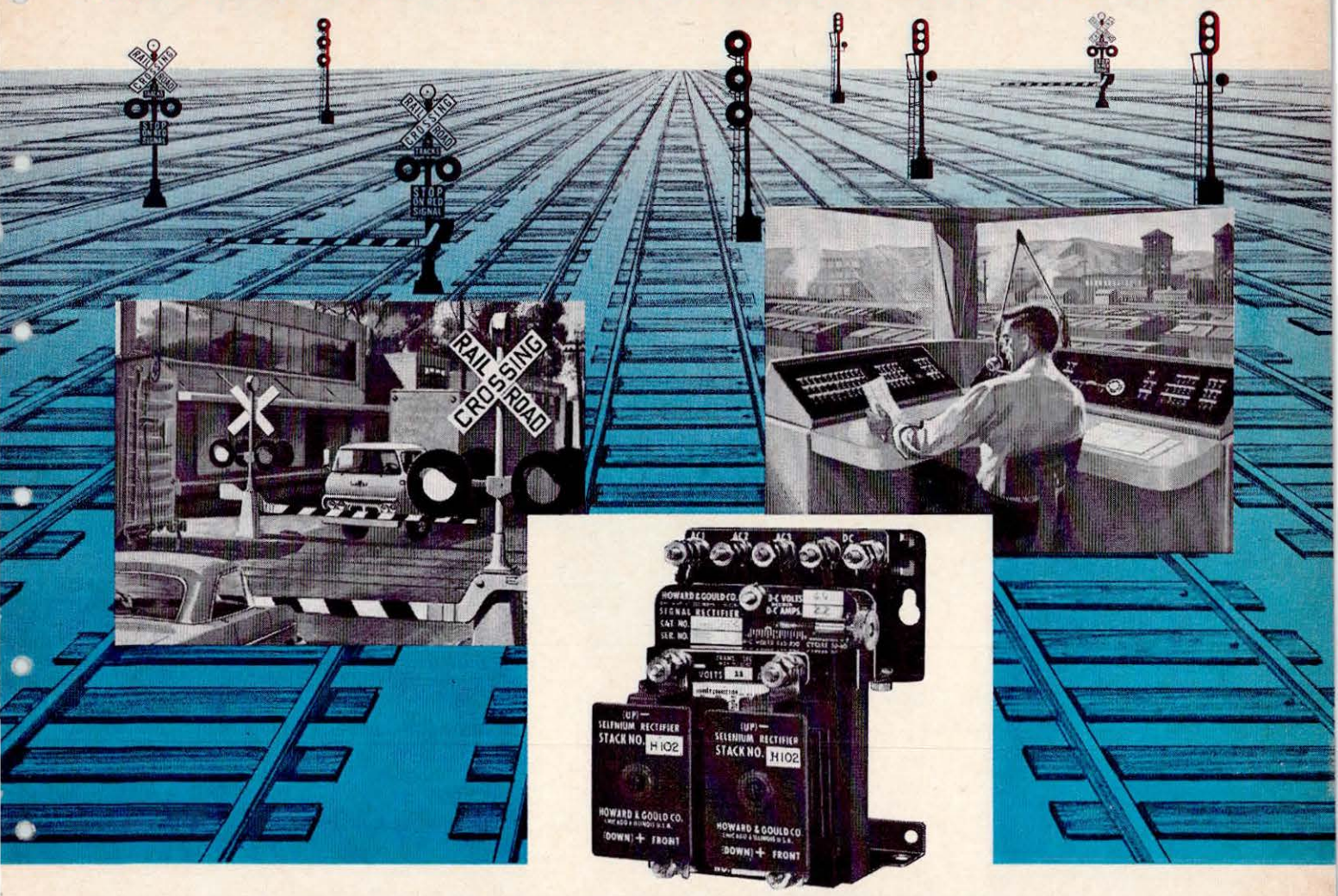


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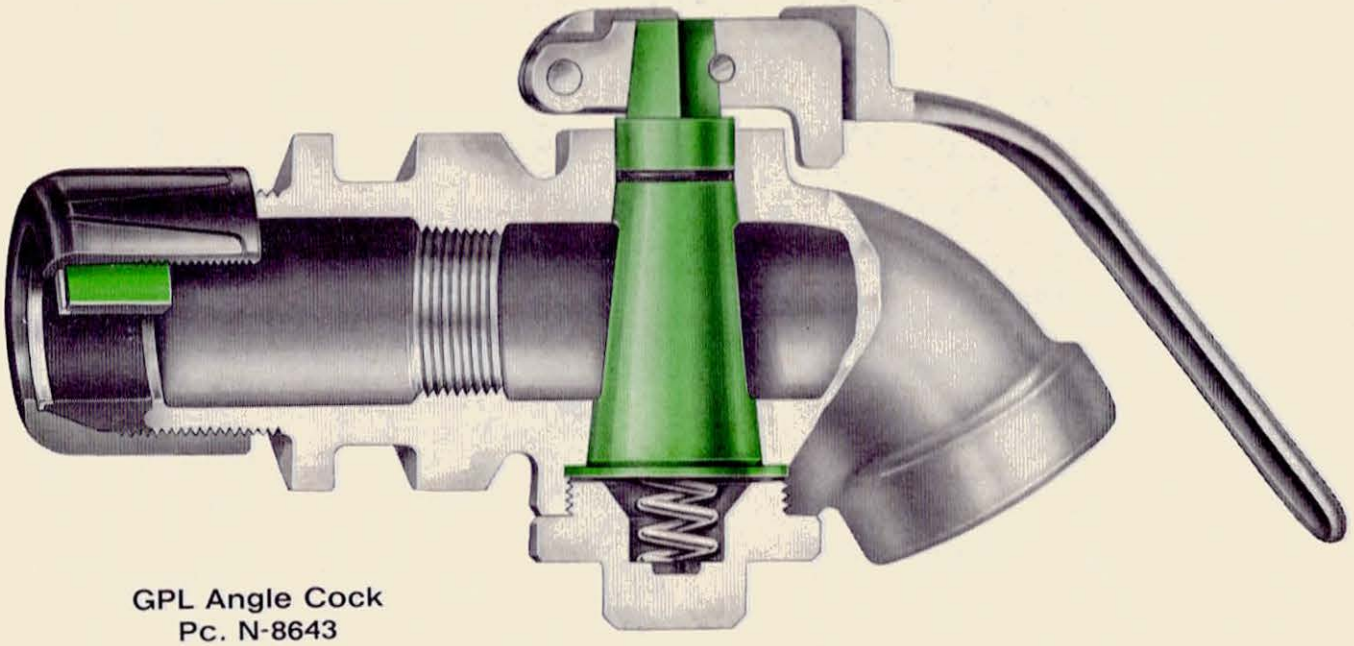

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# WEEK AT A GLANCE

## Newell proposes type-of-car traffic forecasting

Trailer Train President James P. Newell thinks it's time Shippers Advisory Boards updated their traffic forecasting methods. Present quarterly forecasts are based on carloadings by commodities. The method, Newell told the Atlantic States Shippers Board in New York last week, doesn't take into account changing car patterns. It would be helpful to railroads, he suggested, if future forecasts were related to the types of equipment to be required. "In the old days," said Newell, "there was no question but that grain loadings would require box cars. Now much of the grain is loaded in covered hoppers and obviously a 100-ton covered hopper loaded with grain is almost the equivalent of two box cars." He also noted that present forecasts give no indication of requirements for piggyback equipment.

Newell predicted that by the end of 1967, railroads will have captured 60% of new-auto-haulage. As for conventional piggyback, he foresaw continuing annual gains at the rate of 12% to 15% a year.

He disclosed that one of the four container/trailer test cars ordered by TTX is now on test on the Southern Pacific. By mid-year, he said, TTX will have standardized on "one or two types" of the all-purpose cars.

## Senate approves Boyd for transport post

President Johnson's first Secretary of Transportation Alan S. Boyd was expected to take his oath of office this week as head of the new Cabinet-level Department of Transportation. The stage was set for this Jan. 12 when the Senate confirmed the President's nomination of Boyd.

On the same day, the President nominated Everett Hutchinson, a fellow Texan and former member of the ICC, to be Undersecretary of Transportation. Hutchinson has been president of the National Association of Motor Bus Owners since April 1965.

Another DOT nomination which the President sent to the Senate Jan. 12 was that of John E. Robson of Chicago for general counsel of the new department.

## New car orders for '66 close to 100,000 mark

The railroads spent some $1.9 billion for capital improvements in 1966, and a lion's share of the money went for new freight cars—as is evidenced by the number of new units ordered during the year.

A late tabulation of figures collected by Railway Age from line-haul railroads, switching and terminal companies, private car lines, and builders shows that 97,727 cars were ordered in '66. Including rebuilt cars, it's estimated that some 105,000 units were installed last year. The amount spent for the new cars last year sets an all-time record. It's estimated that some $1.5 billion was spent by Class I roads alone for rolling stock, which also includes new locomotives. When new-car spending by private car lines, shippers, and outlays for rebuilts are added, the total for rolling stock is well over $2 billion. The number of new cars ordered in 1966 was the highest in the past ten years.

Heading the railroad shopping list was the hopper—with orders totaling 24,439. The next leading categories were covered hoppers, 20,636; box cars, 17,150; flat cars, 12,788; and gondolas, 7,700. The breakdown, subject to revision, is shown below. Complete statistics begin on page 103.

### 1966 Freight-Train Car Orders

| Box | Flat | Gondola | Hopper | Cov. Hopper | Tank | Ins. Box. | Caboose | Mech. Refrig. | Various* | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 17,150 | 12,788 | 7,700 | 24,439 | 20,636 | 5,675 | 2,728 | 384 | 1,500 | 4,727 | 97,727 |

*Breakdown as to car type unavailable

## MoPac given authority to take over C&EI

The U.S. Supreme Court last week cleared the way for Missouri Pacific control of the Chicago & Eastern Illinois, giving the MoPac a line into Chicago. The action "will permit the revitalization of the C&EI," said MoPac President Downing B. Jenks in announcing plans for the MoPac to move promptly to take control of the line.

The high court (with no accompanying opinion) issued an order affirming a ruling of the federal district court for the Northern District of Illinois which upholds the ICC decision in the case. The Commission's decision came in 1965—in finance docket No. 21755. It granted MoPac's application for authority to control C&EI, meanwhile denying a competing application of Illinois Central for like authority. IC was among those appealing unsuccessfully to the court, other railroad appellants having been Frisco and Monon. C&EI is a bridge carrier operating 860 miles of road. Its lines extend from Chicago southwardly to connections (including those at St. Louis) with MoPac and other roads. The C&EI also extends easterly to Evansville where there is a connection with the L&N.

As to the latter, the sustained Commission decision provides for negotiation by L&N for purchase of the C&EI-Evansville-Chicago line. The ICC did not assign that line to L&N. It attached to its approval of the MoPac acquisition a condition requiring MoPac to cause C&EI to negotiate the matter in good faith.

There was also in the Commission's decision a finding that MoPac and its parent, Mississippi River Corp., had violated the Interstate Commerce Act in a period during which the C&EI holdings were not trusteed as they now are.

It was determined, however, that this violation did not preclude approval of the MoPac application on its merits.

## GUS WELTY'S LINES ON LABOR

WELTY

**LABOR EXPECTS THE WORST** from the 90th Congress. It may get it. What organized labor itself does over the next year-and-a-half or so may be the guide to what Congress does. If union strategy calls for bold exercise of power, Congressional reaction may show the organizations what power really is. If union strategy calls for moderation, then Congress will likely keep hands-off the processes of collective bargaining. The problem is one which organized labor hasn't had to face very often in recent years. To be sure, there was Taft-Hartley and there was Landrum-Griffin. But the record of the past 20 years shows organized labor has received quite a bit more than it's been forced to give, at the hands of the legislators.

**STUDY OF UNION** publications since the Nov. 8 elections indicates that the organizations are preparing the membership for the worst. Unfortunately, however, there doesn't seem to be much effort to relate cause and effect. The implication is that organized labor quite possibly faces a period of persecution, and there is no mention of the fact that the "persecution"—if it could be so called—may be earned.

**TRANSPORTATION UNIONS,** as it happens, have been much responsible for the fears organized labor as a whole now expresses. In just the past year, for example, there were (1) airline strikes involving both domestic and overseas operations; (2) the problems of Teamsters President James R. Hoffa with the courts; (3) the New York transit strike. Ironically, the standard railway labor organizations have gone through a relatively quiet year—marked only by the usual amount of sparring, by scattered work stoppages and by the continuing refusal of the Brotherhood of Locomotive Firemen & Enginemen to accept the fact of fireman-off.

**RAIL UNIONS,** however, still must contend with a residue of resentment leftover from the work-rules dispute. They also have to accept the fact that railroads are the backbone of the nation's transportation and distribution system—and that a rail strike can be, therefore, a far more serious thing than an airline strike or a subway strike or even a trucking strike.

**THE REAL PROBLEM** is that national-interest, as it is now defined, may not permit a major shutdown in certain industries—including, importantly, railroads. But if that's so, how then can employees and their organizations act effectively to protect their interests and advance legitimate programs? Many "solutions" have been proposed—and none has been all-around acceptable. Perhaps the 90th Congress will find a way. Perhaps the Congress—taking its cue from President Johnson's 1966 State of the Union message—can arrive at a fair means of preventing strikes in vital industries. As some see the situation, it's about time somebody did.

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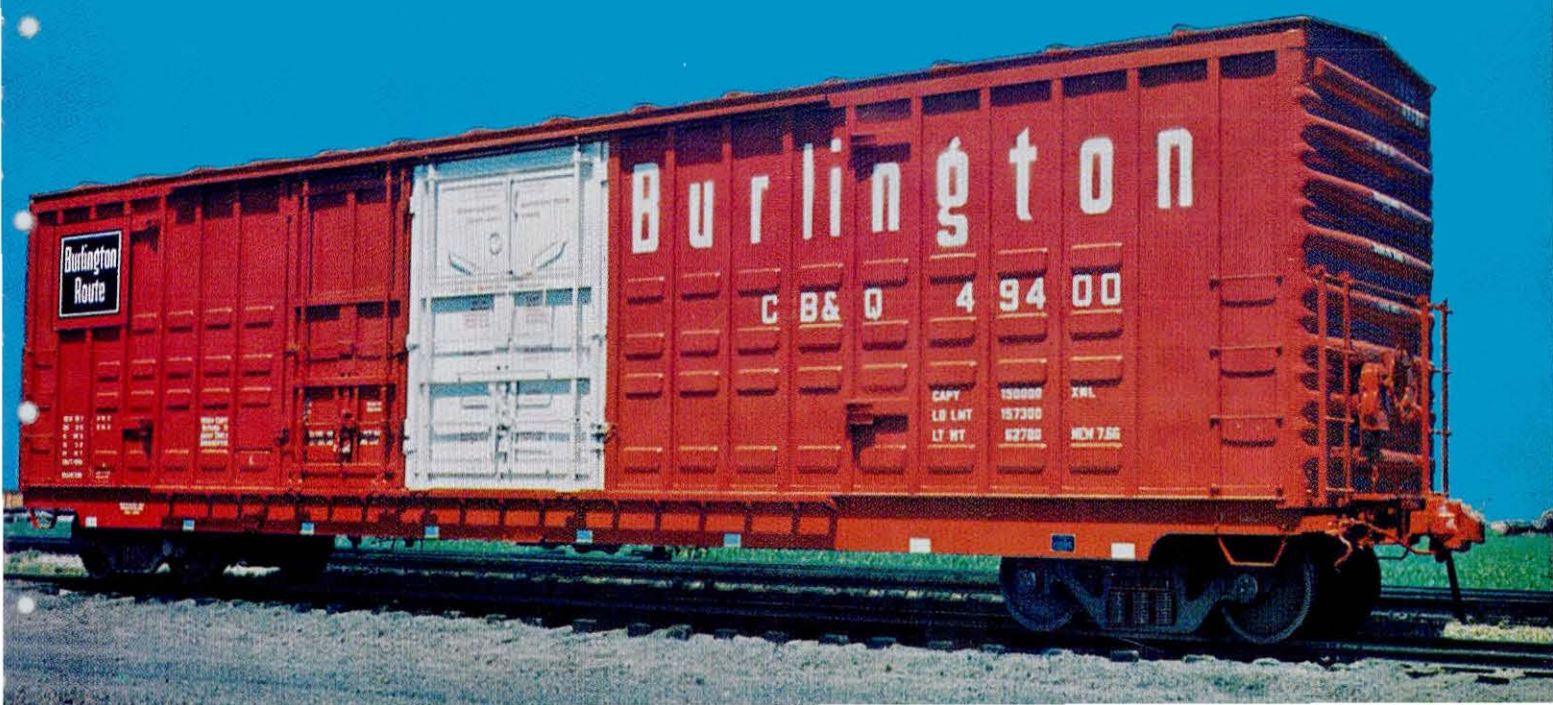
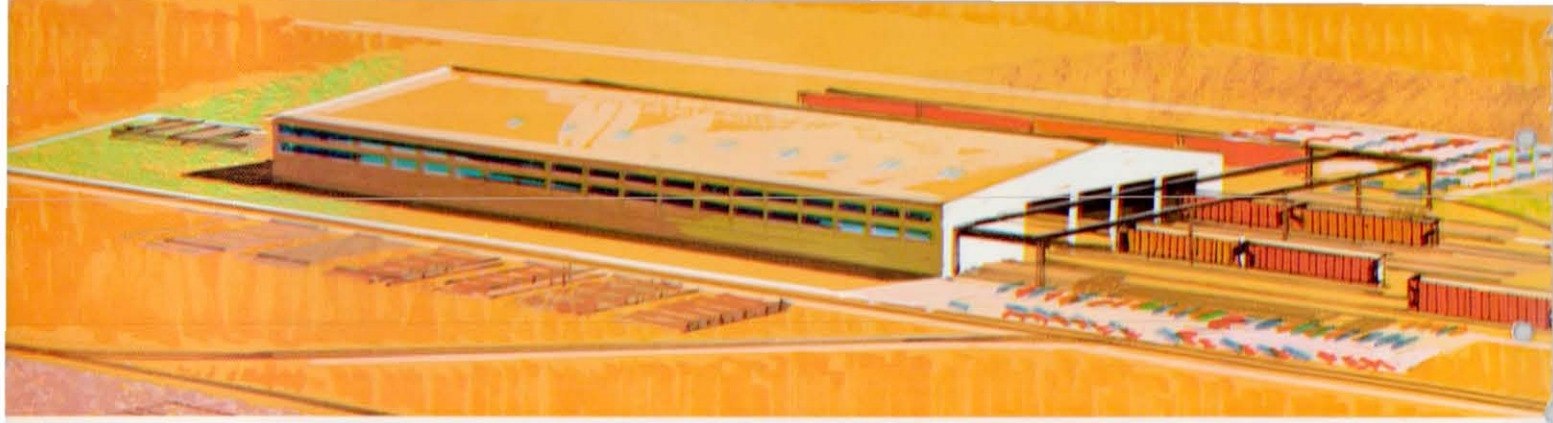
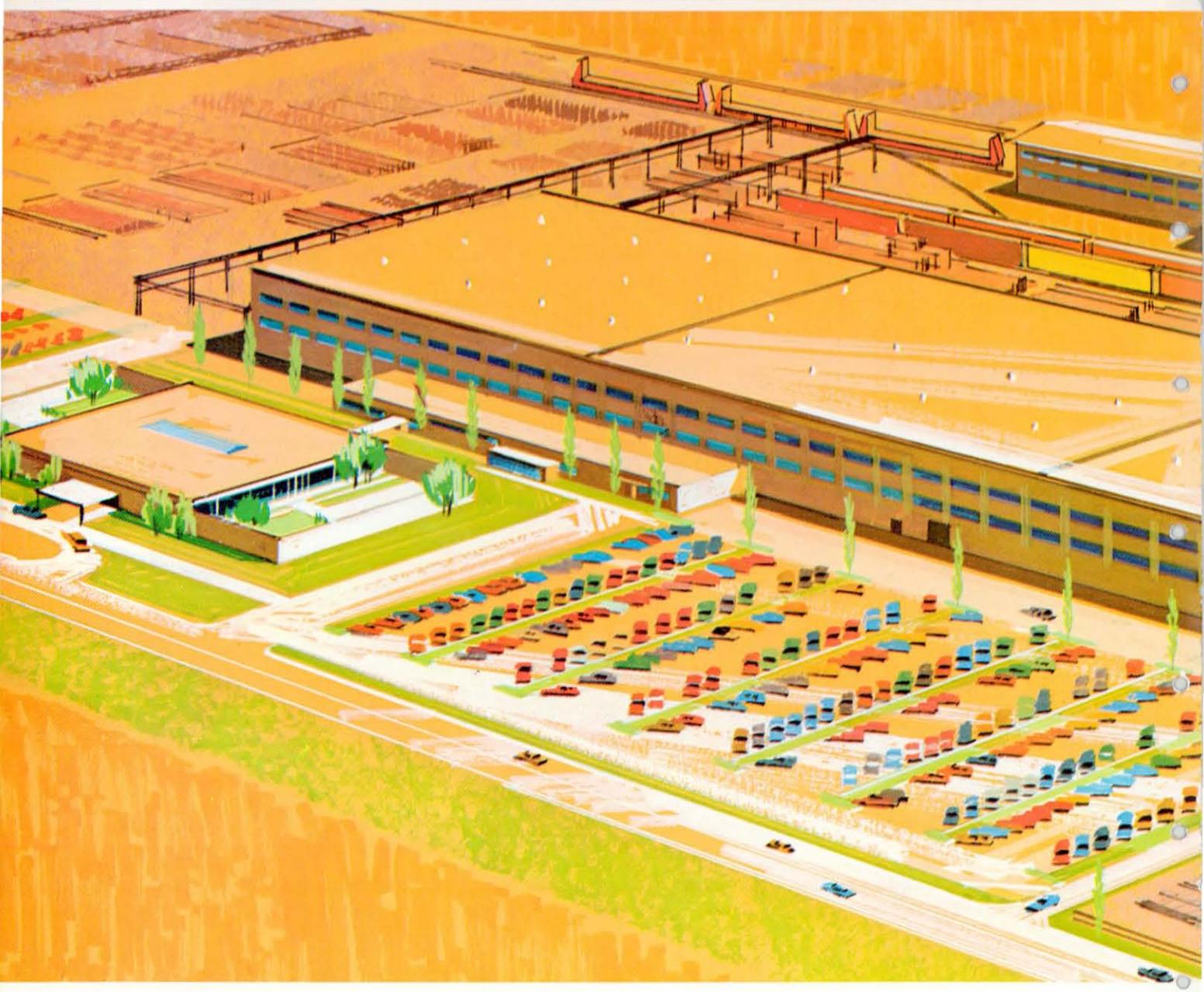
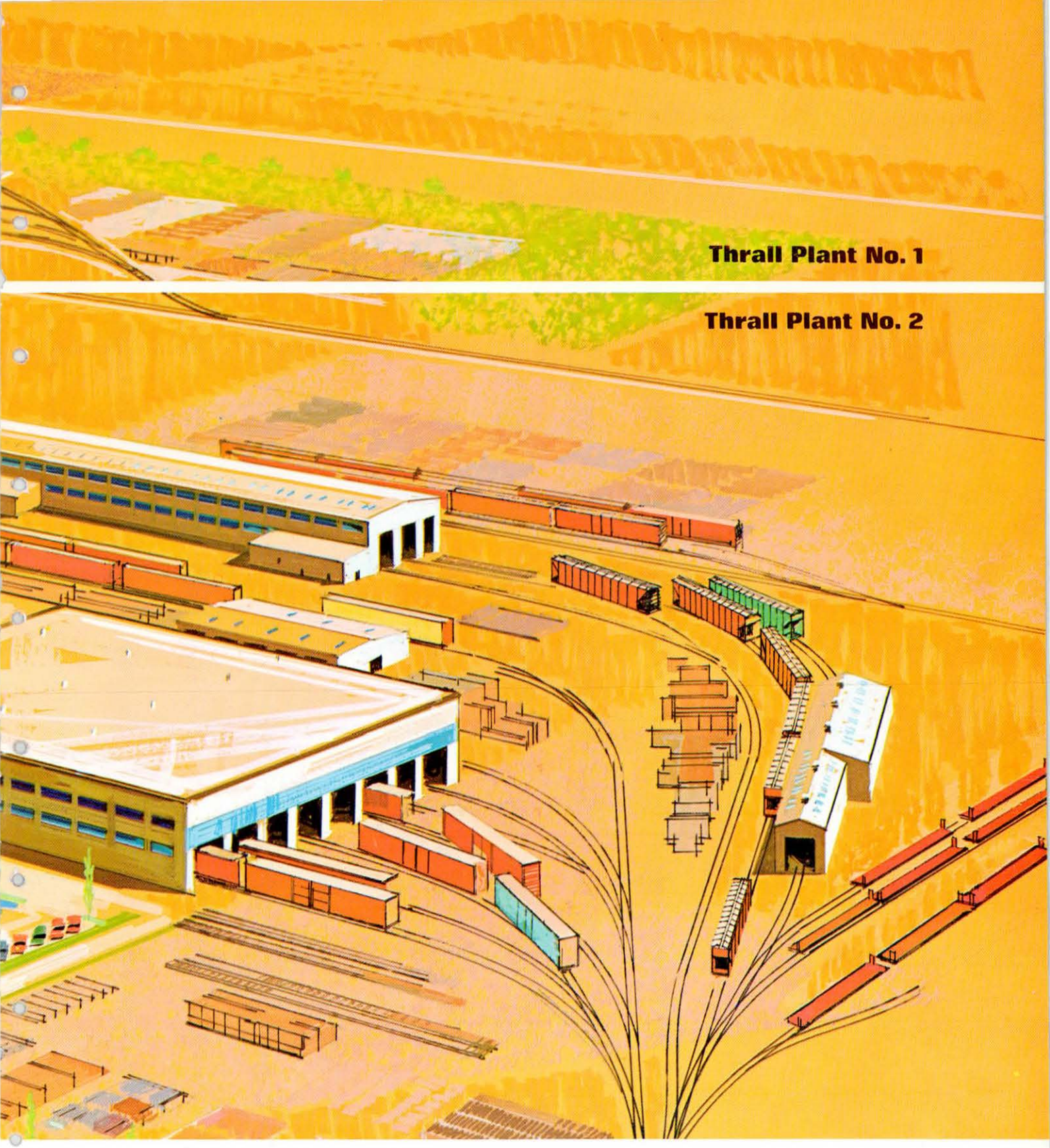




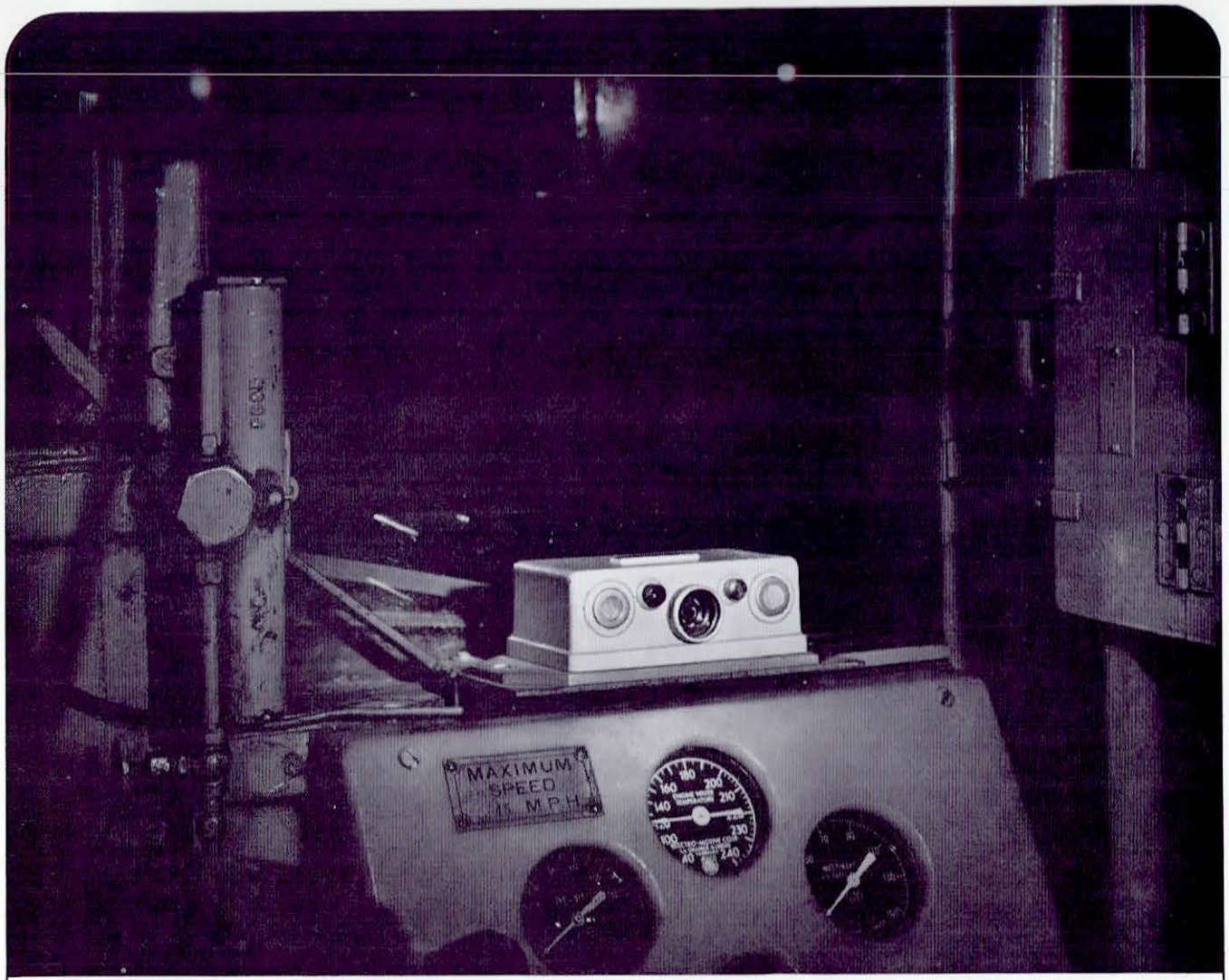




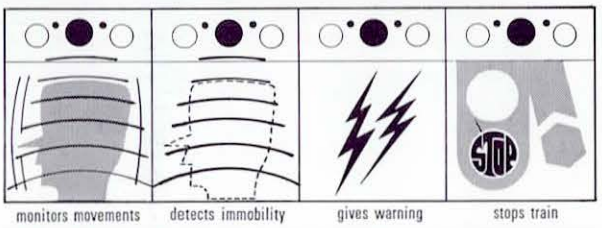

**Continually building to serve you better**

THRALL CAR

CHICAGO HEIGHTS, ILLINOIS 60412




# BARCO Life-Gard™ gives your train an extra brain



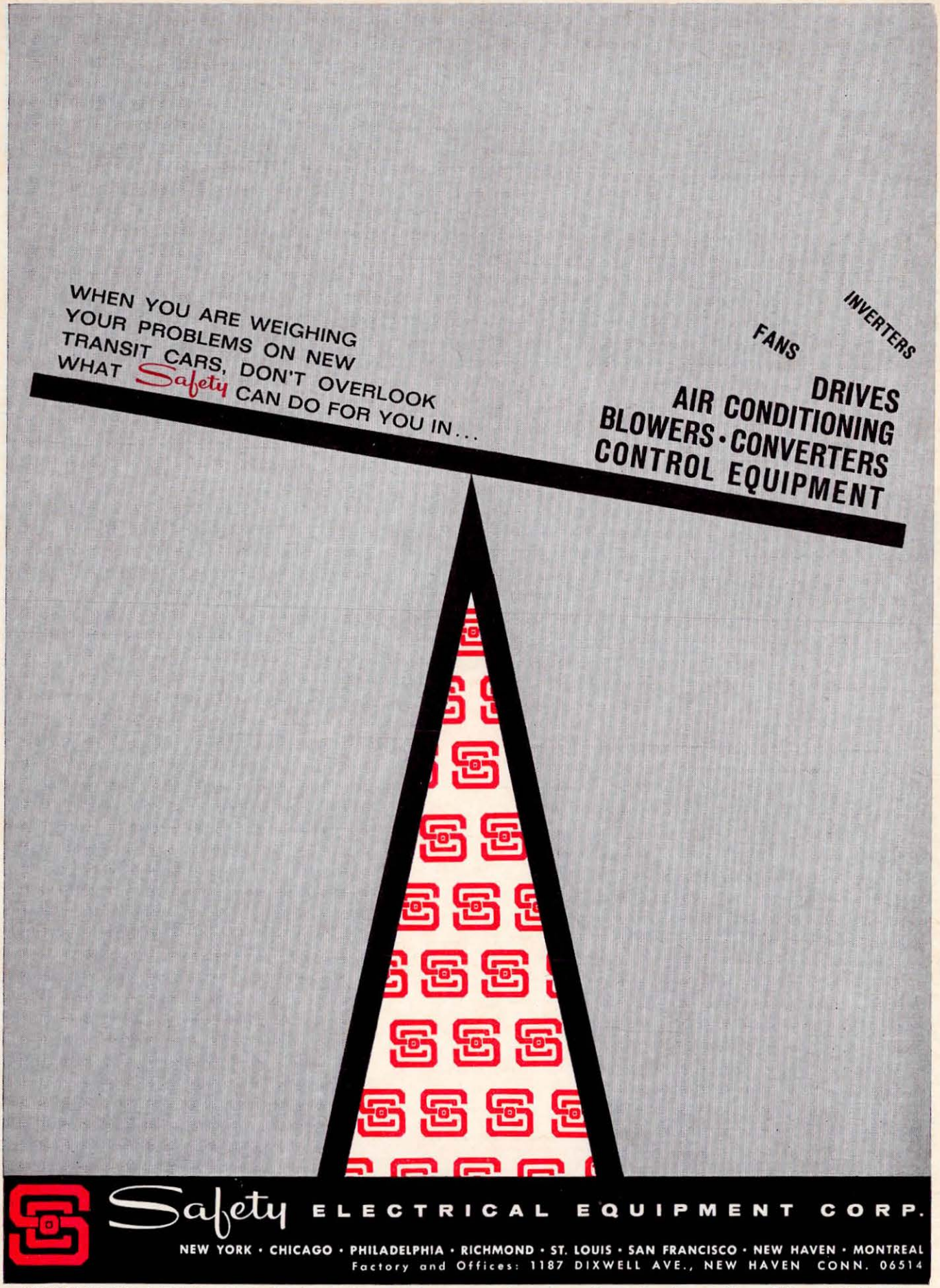

Barco Life-Gard, the electronic safety device, flashes a warning signal then automatically actuates the air brake system if the engineer is unable to act. Here's how it works. Mounted on the control stand in the engineer's cab, Life-Gard transmits a sonic signal that monitors the engineer's movements. When Life-Gard detects the absence of normal movement, it flashes a warning light and seconds later, sounds a buzzer. If there still is no movement by the engineer, brakes are automatically applied.

Easy-to-install Life-Gard provides positive protection for your crew and equipment. And its precision components make it the most reliable safety control available.

Life-Gard is but one of many Barco products for the railroad industry. Barco makes electronic speed indicators, electronic recorders and other modern products for the modern railroad. For more information on Life-Gard or other Barco products, just write. Aeroquip Corporation, Barco Division, 500 Hough Street, Barrington, Illinois.

*Life-Gard Control Patent U.S. 3275975. Aeroquip products are protected by patents internationally.*

Aeroquip
REG. TRADEMARK
**BARCO DIVISION**




Safety ELECTRICAL EQUIPMENT CORP.

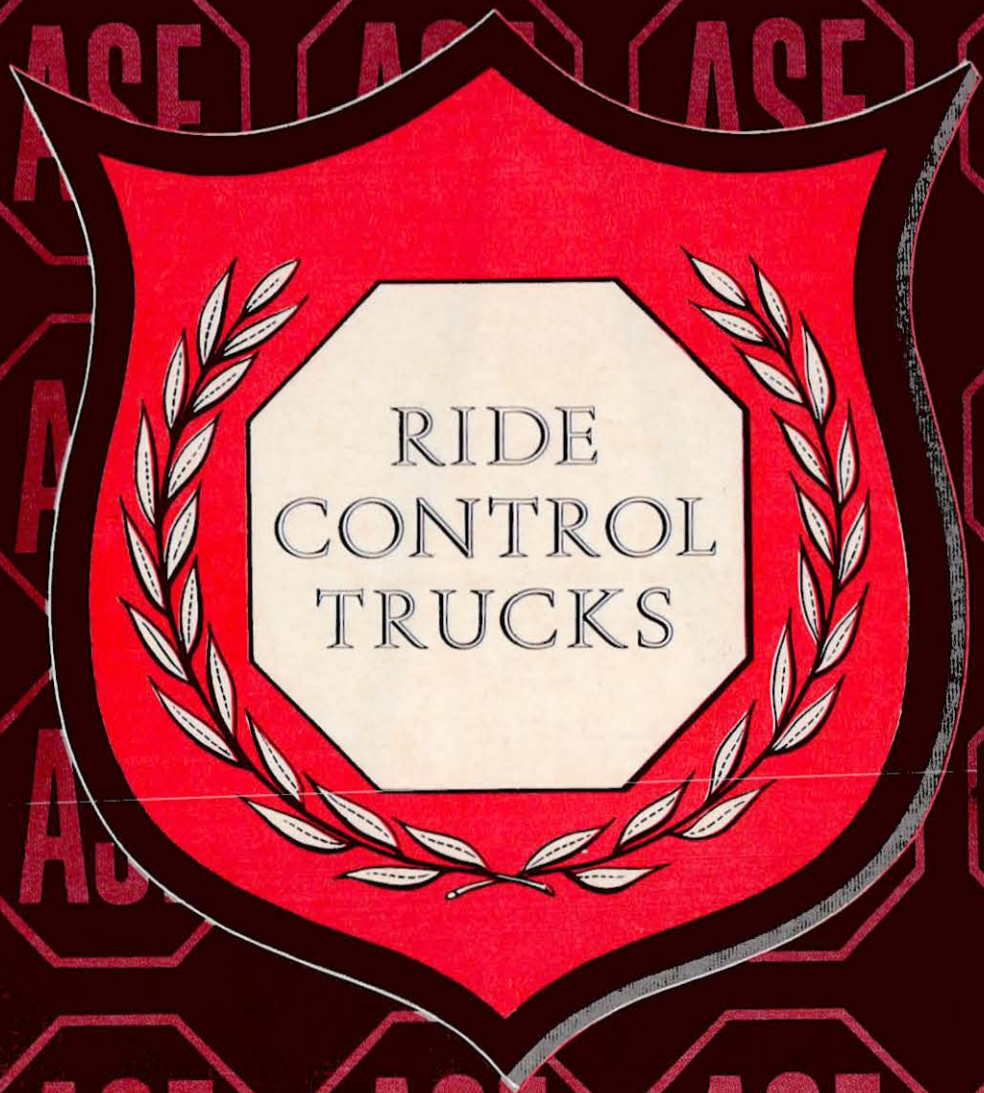
NEW YORK • CHICAGO • PHILADELPHIA • RICHMOND • ST. LOUIS • SAN FRANCISCO • NEW HAVEN • MONTREAL

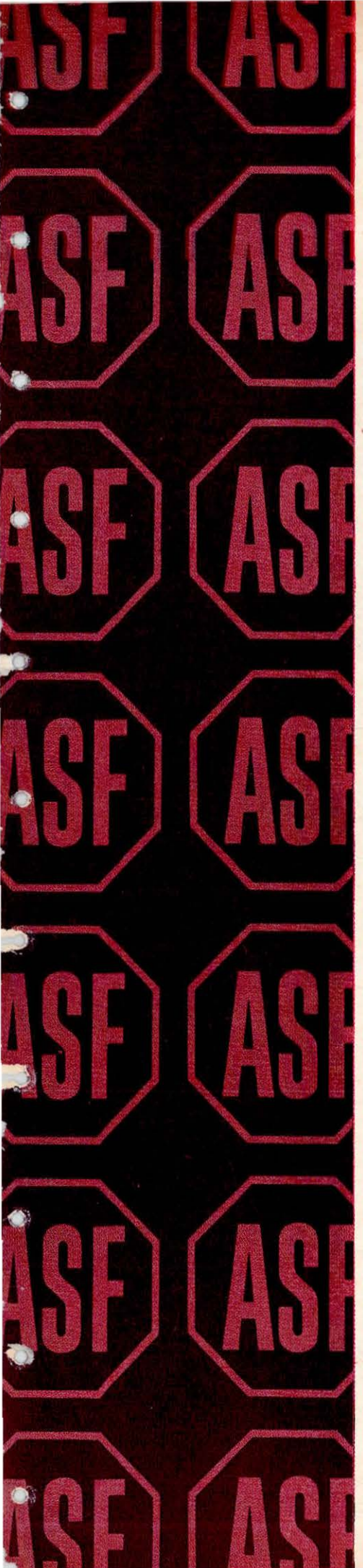
Factory and Offices: 1187 DIXWELL AVE., NEW HAVEN CONN. 06514

"SAFETY" PRODUCTS INCLUDE: Air-Conditioning Equipment • Genemotors • Generators • Fans • Regulators • Blower Units • Switchboards
Motors • Motor Alternators • Dynamotors • Motor Generators • Dual Voltage MG Sets • Generator Drives • Shafts & Clutches

Circle 9 on reader service card

# RAILROAD HALL OF FAME






# There is only one Ride Control® truck

# ASF

Imitation is a sincere form of flattery.

The long-time popularity of ASF trucks makes it common to misuse the name "Ride Control" when referring to other trucks with lesser known built-in snubbing devices.

But don't be misled. There's only one Ride Control Truck.

Why?

Because Ride Control Trucks feature the longer-lasting exclusive ASF snubbing system that constantly controls vertical and lateral bolster movement. Rotation Stops help stabilize the bolster and prevent loss of load coil springs during end impacts.

ASF provides the smooth riding qualities required for today's high speed freight service. And it's a fact that ASF's built-in ruggedness reduces overall maintenance costs.

All these factors add thousands of profitable miles to the life of your freight car.

For more facts—see your ASF representative, or write American Steel Foundries, 1005 Prudential Plaza, Chicago, Illinois 60601.

ASF **American Steel Foundries**

ONE OF THE Amsted INDUSTRIES

# "Will Katy prove to be a Cinderella?"

asked *Modern Railroads Magazine*
October, 1965, reflecting the industry's
interest in Katy's rehabilitation

## Katydid!

On November 11, the Missouri-Kansas-Texas Railroad Company was awarded Second Place in the annual Golden Freight Car competition.

Runner-up recognition from the Railway Progress Institute reflects Katy's tireless, year-long efforts of rehabilitation; its acquisition of new rolling stock and facilities; its hard-hitting sales promotional programs . . . all to make the Katy worthy of your business. Katy is moving fast in the right direction. This transformation is your assurance that you can COUNT ON KATY all the more in 1967 for your total rail transportation needs within and through the area it serves.

## Katy's No. 2 and proud of it!

Photo shows Arthur H. Smith (left), chairman of the Railway Progress Institute, presenting the Golden Freight Car runner-up plaque to John W. Barriger, Katy president, "for its remarkable comeback from financial trouble." Said the RPI, "Katy has convinced shippers that they need its revitalized transportation services."

**MISSOURI-KANSAS-TEXAS RAILROAD COMPANY**

Katy Building • Dallas, Texas 75202 • 420 Gimblin Road • St. Louis, Missouri 63147

M-K-T KATY RAILROAD

Circle 11 on reader service card

WINE TOLEDO APPL. CO. PATD.
All appliances designed and engineered by WINE . . . manufactured in the U.S.A. and Canada by UNITCAST.
THREE SURE WAYS TO STOP LADING LOSS

Patented

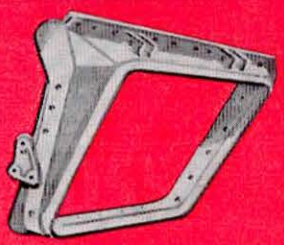
**Over 115 Domestic and Foreign Railroads prove superiority of WINE cast steel hopper frames, locks, hinges!**

Wine-equipped hopper cars *consistently* deliver *all* the payload.

The structurally sound Frames, Locks and Hinges work as a team to provide total 3-way protection. And they keep on protecting lading, earning profit, long after other appliances have worn out.

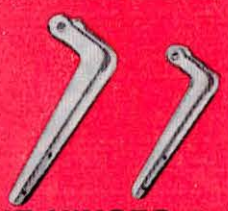
No matter what you pay, Wine appliances are *the finest any money can buy!* Engineering and purchasing management can rely 100% on Wine for unmatched product performance *plus* competitive pricing and reliable delivery schedules.

To save purchasing dollars, to stop lading loss and to practically end maintenance upkeep, START SPECIFYING WINE . . . a start-to-finish appliance designer-manufacturer. Call your local Wine sales representative or write the factory today for complete details, including product specifications.



**WINE FRAMES** Rigid, non-distorting one-piece precision steel castings that fit tight for life.

**WINE LOCKS** Fully adjustable for easy installation. Made to operate easier, last for life of car and then some!



**WINE HINGES** Single steel castings with hinge lugs built into frame for permanent alignment, bind-free operation.

PRODUCER OF OVER FIFTEEN *THOUGHTFULLY ENGINEERED* QUALITY APPLIANCES *PLUS* CUSTOM CASTINGS BY UNITCAST

**THE WINE RAILWAY APPLIANCE CO.**

DIVISION OF UNITCAST CORPORATION • TOLEDO, OHIO 43609
Canadian Manufacturing Division: *Canadian Unitcast, Ltd.*, Sherbrooke
Sales and Service: *The Holden Co., Ltd.*, 614 St. James St., W., Montreal

**Circle 12 on reader service card**

Speed Frate
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Speed Frate

# Operate smaller yards economically the *Speed Frate* way

**Speed Frate is packaged engineering for smaller yards.**

**With it you can process 5 cars per minute . . . have 1 man supervision of classification . . . cut locomotive time to the bone . . . and, eliminate costly buildings and heavy regrading.**

**Speed Frate puts modern, rugged components to work for greater shipper satisfaction: weight-automatic retarders, radar, centralized switching . . . even, remote control of locomotive speed.**

**Designed with both you and your shipper-customers in mind, Speed Frate comes to you from the company with over 60 years of railroad control experience . . . the same company which developed the car retarder, automatic switching and radar-computer yard automation.**

**The Speed Frate yard system is new. Because it is modular, versatile and simple . . . Speed Frate can be cutting costs for you in minimum time . . . at minimum investment.**

**Ask about it.**

**GENERAL RAILWAY SIGNAL COMPANY**

A UNIT OF GENERAL SIGNAL CORPORATION

ROCHESTER NY 14602 NEW YORK NY 10017 CHICAGO IL 60601 ST LOUIS MO 63101 MONTREAL 2 P.Q.

3393

Circle 13 on reader service card

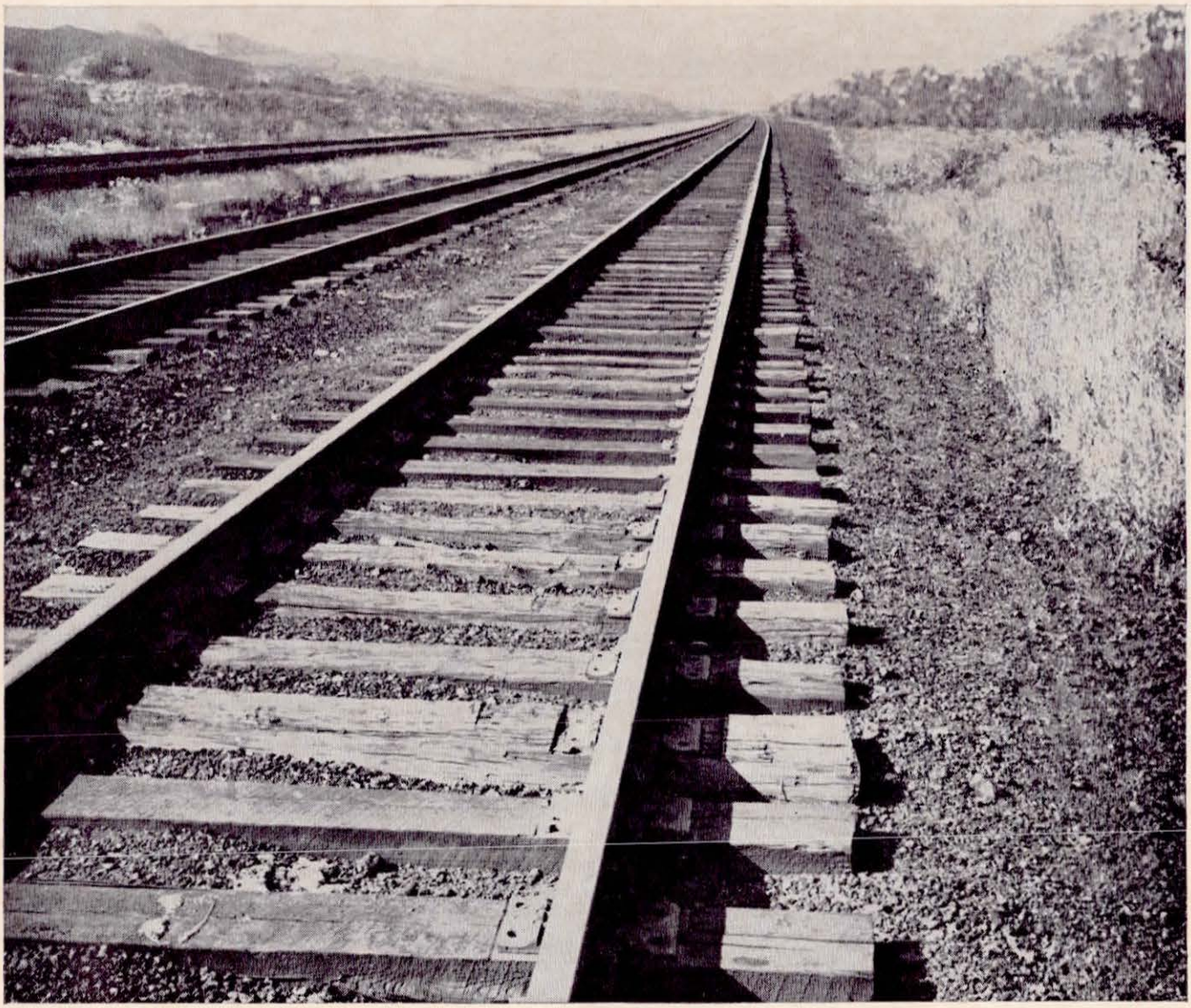
Once down the tracks and you're on top of vegetation control problems. For really tough spots, there's TORDON® 10K Pellets herbicide. Kills most any woody plant, including maple, conifers, locust and sassafras. One application gives control lasting as long as three years. A handful takes care of 30 square feet of even the toughest brush. Economical, because you can select the precise areas that need this powerful treatment.

For general brush and woody plants, there's ESTERON® 245 O.S. brush killer, long a favorite with industry. This effective and economical liquid herbicide mixes easily with water, water-oil or straight oil carriers. Doesn't foam. Won't clog spray equipment. Works with low-volume hand, or high-volume power, or aerial spray apparatus. Lets you control large areas for dollars less.

Together, these Dow herbicides give you a low-cost program that saves money, time and labor. You get positive control over undesired vegetation, clear up your rights-of-way, keep them that way for less and less cost as time goes by. Write for complete details. Right away. The Dow Chemical Company, Agricultural & Industrial Bio-products Sales, Midland, Mich. 48640.

BRUSH DISAPPEARS.

# We make it clear right away.



DOW

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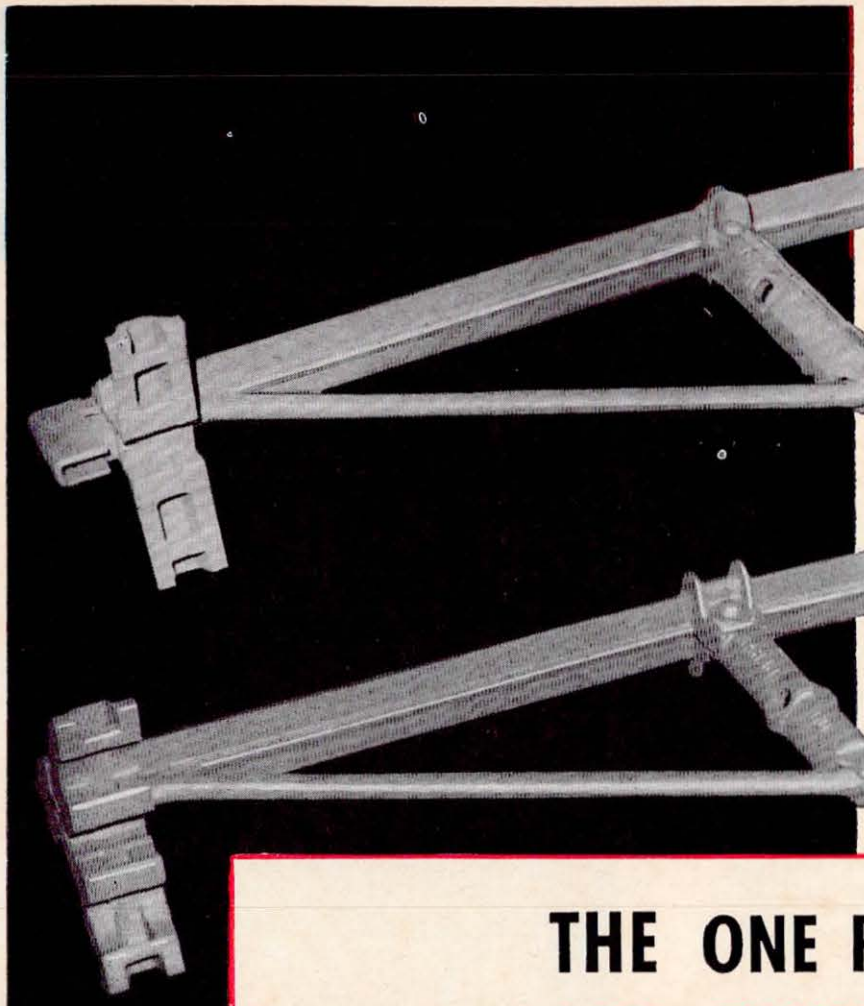
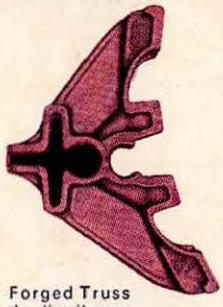


The Davis Solid Truss has been used *on more than 3,500,000 Unit-Type brake beams.*

Davis Solid Truss for Unit and Hanger-Type Brake Beams.

# THE ONE PIECE FORGED SOLID-TRUSS BRAKE BEAM



Solid Forged Truss correctly distributes pressure from brake heads.

## Still The Most Economical

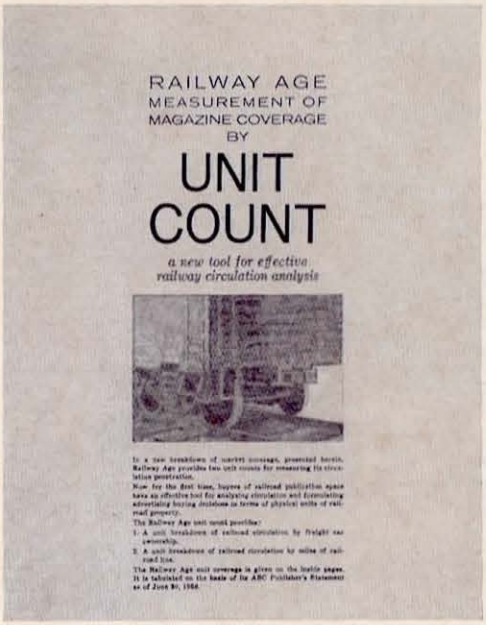
Forged in one piece, the Davis Solid Truss eliminates need for two piece riveted, welded or bolted compression and tension members. Always rigid, strong and safe. A recognized standard for more than 50 years. ■ Certified are brake beams for 28,000, 24,000 and 18,000 lbs. capacity—all A.A.R. approved. Any part is renewable without disturbing the truss on hanger-type brake beams, and brake heads are interchangeable right and left. ■ *Davis Brake Beam Company, Johnstown, Pa.* Represented in: Boston, Chicago, Cleveland, Omaha, Richmond, St. Louis and San Francisco.

**DAVIS SOLID-TRUSS BRAKE BEAMS**

Circle 15 on reader service card

# TWO NEW AIDS

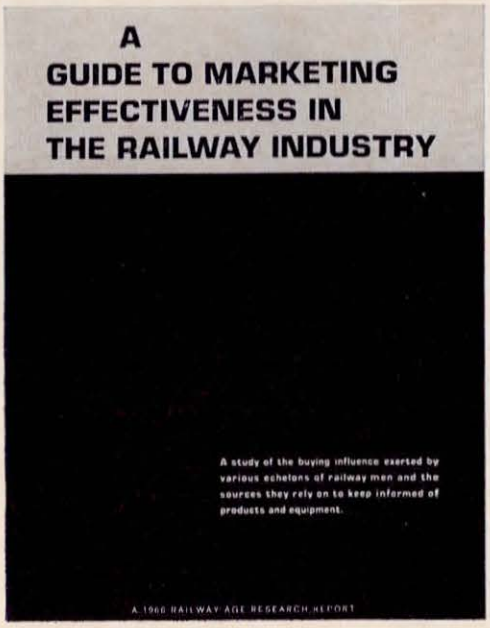
## to advertising and marketing effectiveness in the railway industry




Railway Age now offers advertisers a new measurement of its circulation coverage and penetration, based on two unit counts of railroad property—freight car ownership, and railroad mileage. This new study shows how Railway Age reaches railroad buying power where it is of greatest importance.

It lists Railway Age circulation by 8 groupings of freight car ownership and by the same number of groupings of railroad line mileage. Circulation data for each grouping is presented in the exact occupational classifications shown in the Publisher's ABC Statement.

Available for the first time in the railway industry, this pinpointed analysis should provide a new dimension for the selection of railway advertising media.


A
GUIDE TO MARKETING
EFFECTIVENESS IN
THE RAILWAY INDUSTRY
A study of the buying influence exerted by various echelons of railway men and the sources they rely on to keep informed of products and equipment.
A 1966 RAILWAY AGE RESEARCH REPORT

Now available: A new study of railway buying influences and the sources railway men use to obtain product information. It provides answers to a wide range of questions designed to show *where* and *how* suppliers can best get through to the railroads.

This study should be immensely helpful in planning sales and marketing strategy. It has been obtained through a Simmons-Boardman Marketing Effectiveness Survey personally conducted among 276 management officers and supervisors on 28 Class I railroads and five transit lines.

Outstanding in the results of the survey is the top position occupied by railway magazines as sources of railway product information. These magazines rated high among all nine of the groups of railway men surveyed.

*Write for your copies of these studies to Railway Age*
*30 Church Street, New York, N.Y. 10007—Attention: Robert G. Lewis, Publisher*

# RAILWAY AGE

# Here's how Atlantic Coast Line fills 20 locomotive sand boxes in 18 minutes!

You're looking at a new WHITING SANDING GANTRY. It requires only one operator . . . moves horizontally and vertically . . . carries a 180 cu. ft. sand hopper to service as many as *six stationary locomotives!*

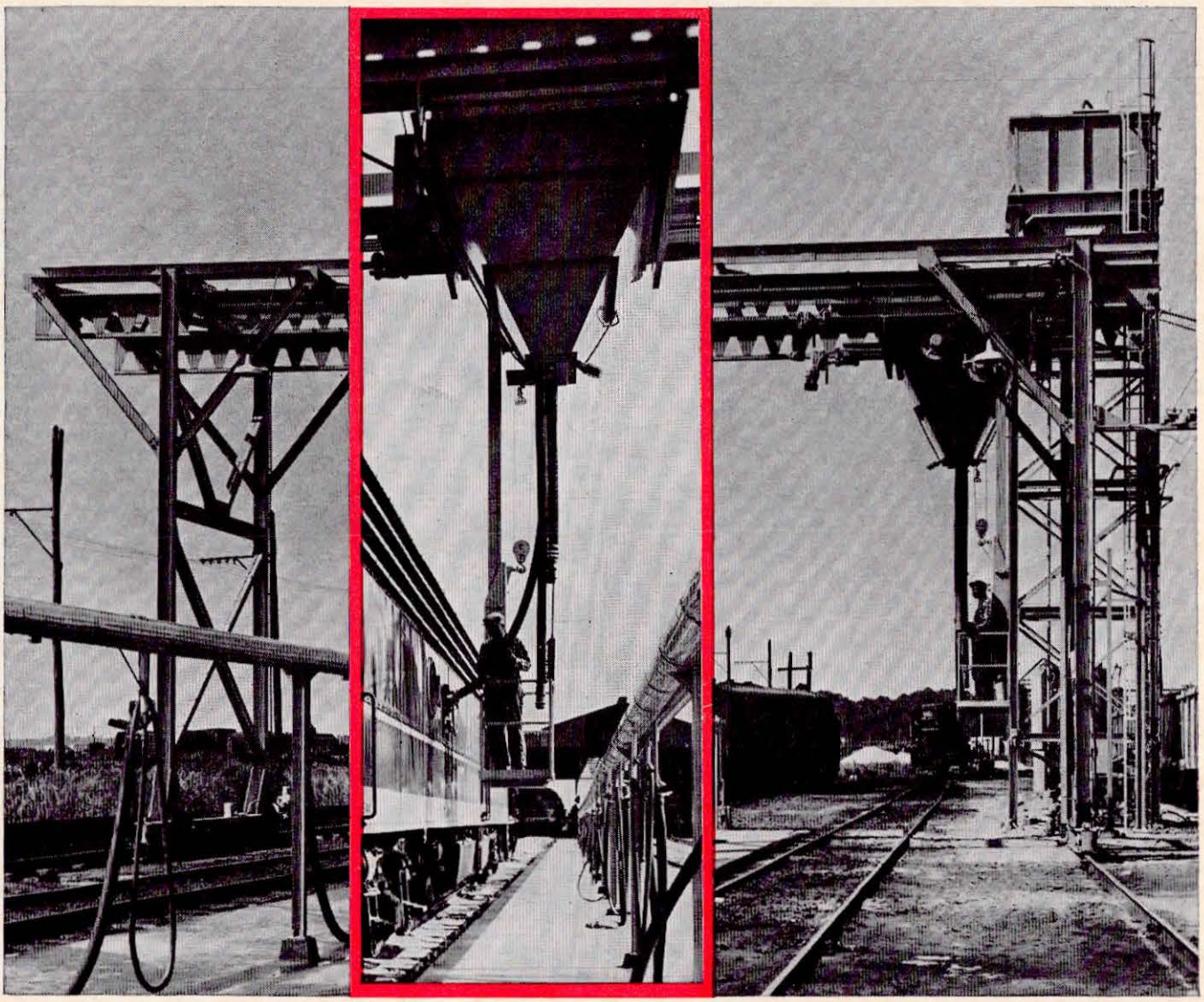
The one shown here is installed at Atlantic Coast Line's Waycross, Georgia facility. Recorded performance includes servicing five locomotives with four sand boxes each in precisely 18 minutes!

The unit is electrically operated, with all controls located on the operator's platform. The platform can be positioned next to any sand box on any locomotive. An automatic signal tells the operator when the hopper requires refill.

The new Sanding Gantry is just one more Whiting way to cut your service costs. Write us for details.

**WHITING CORPORATION**

HARVEY, ILLINOIS 60426 U.S.A.



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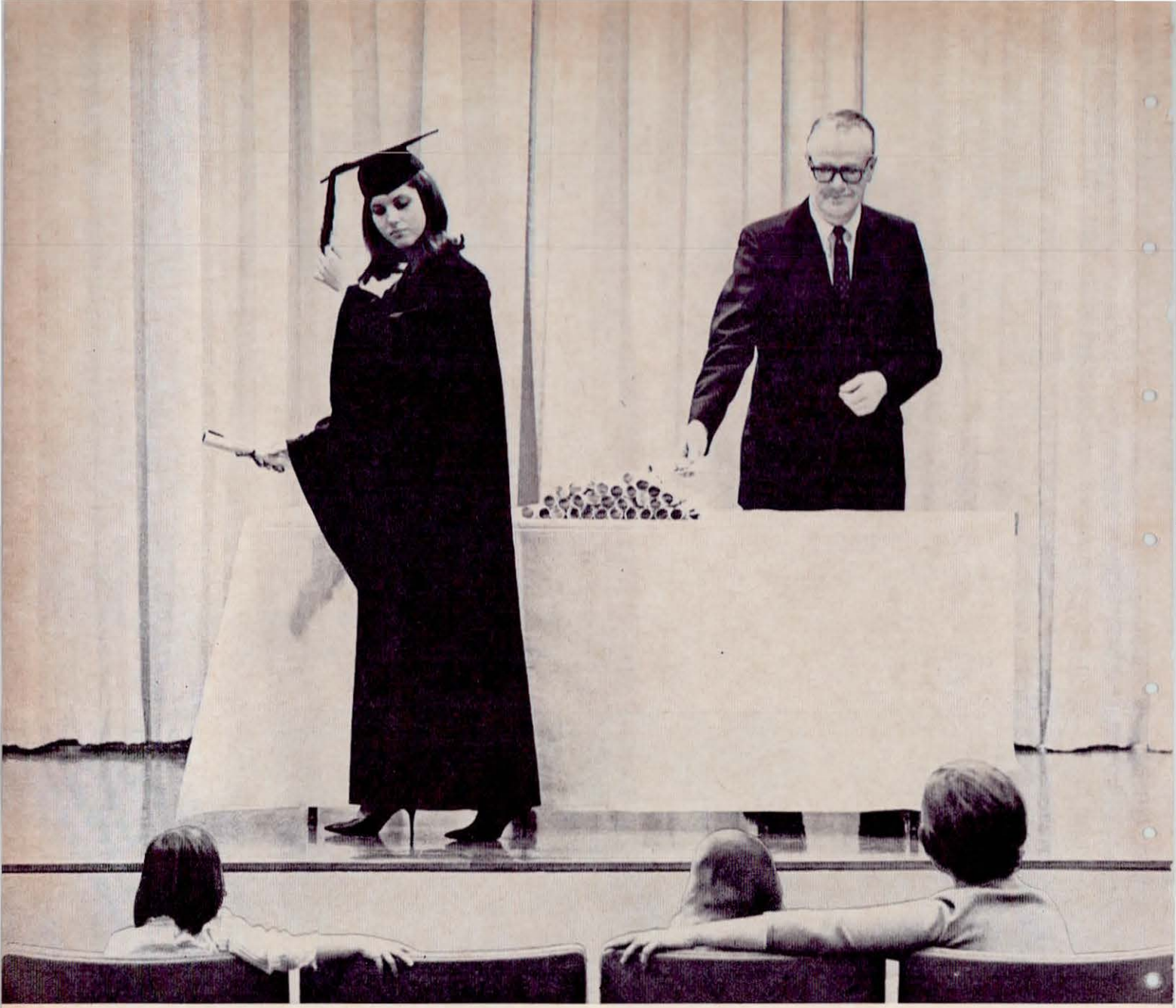


# "Never marry a Humble Railroad Man."

At the graduation exercises, only one seat was vacant — waiting for a father who would be there if he could.

He never made it.

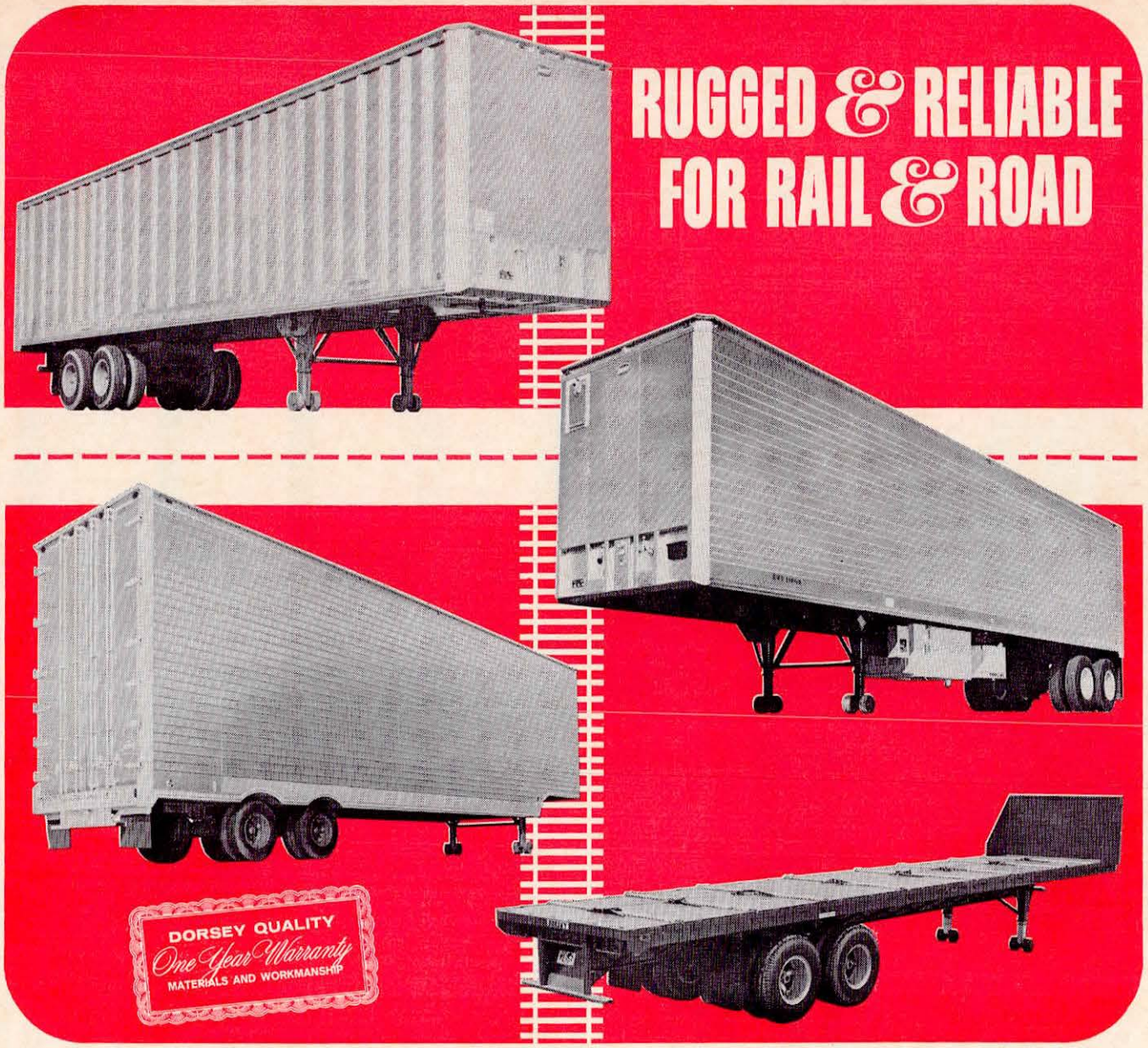
Because he is a Humble Railroad Man. And when a customer calls for help — in a railroad shop or anywhere along the line — that call usually takes priority over everything else — including birthdays, anniversaries and graduations.

Our man knows that this is the only way to supply the products and services you need, because he *started* in the railroad shops. Worked his way from special apprentice up to diesel foreman of an eastern railroad. So he is a railroad man's railroad man.

Most Humble Railroad Sales Representatives are.

And if they can't always fit a graduation into their busy schedules, they *can* help you keep any kind of equipment on schedule. Give us a call — any time!

**HUMBLE** OIL & REFINING COMPANY . . . THE PEOPLE WHO "PUT A TIGER IN YOUR TANK.®"




For any kind of freight, Dorsey builds a trailer that will give you dependable, trouble-free service under the most rigorous conditions. The variety of Dorsey piggyback models includes dry freight vans, open tops, refrigerated trailers and platforms. Each is ruggedly engineered and has helped earn for Dorsey an industry-wide reputation for reliability.

If you need engineering assistance or quotations, call and a Dorsey Executive Account Manager will be at your desk within hours.

*Write for new brochure showing full details on the complete line of Dorsey piggyback trailers*

DORSEY TRAILERS®

**DORSEY TRAILERS/ELBA, ALABAMA**

A Subsidiary of The Dorsey Corporation

**Circle 19 on reader service card**

# HOW TO BE LIGHT-FOOTED

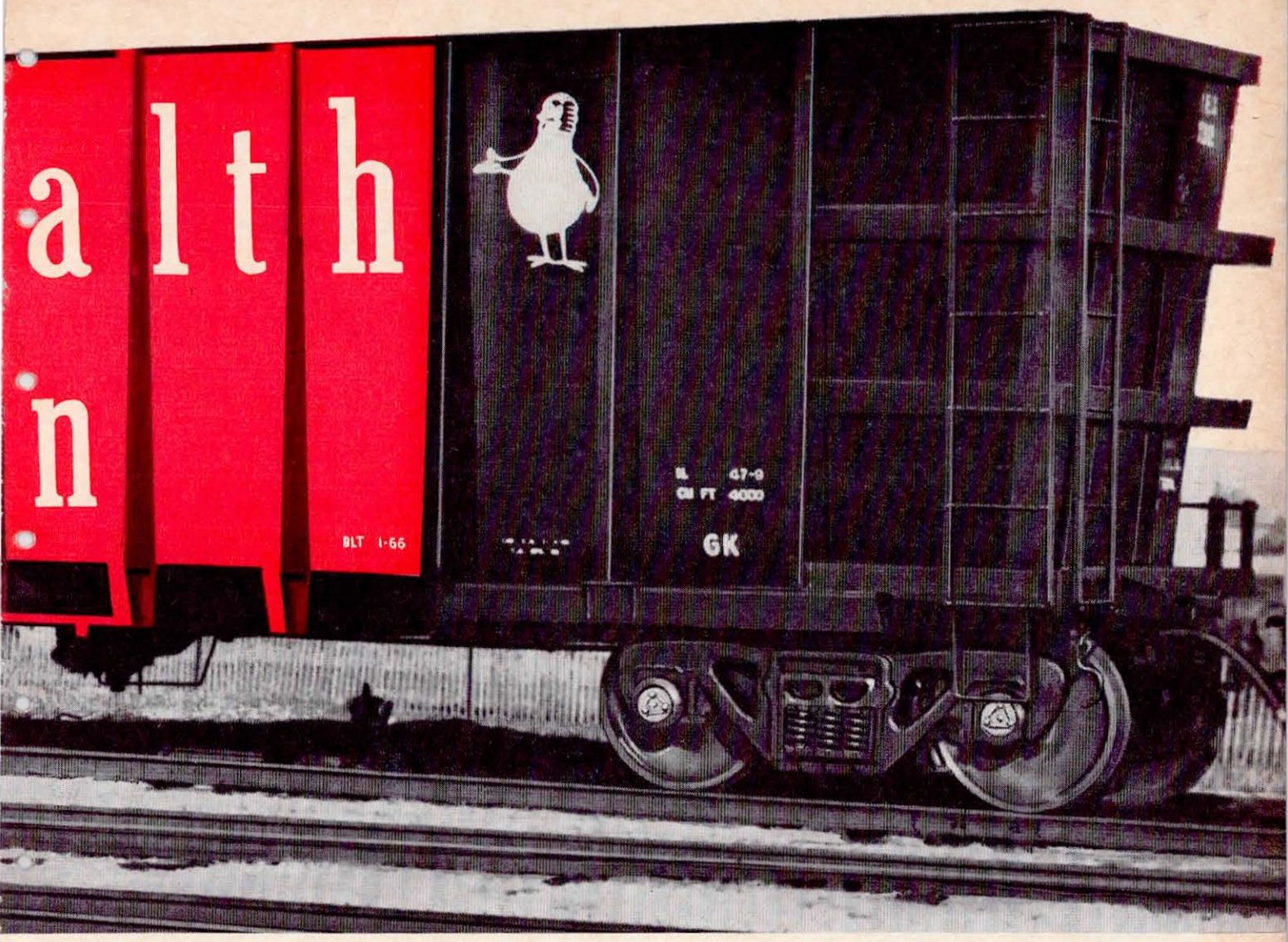
## Commonwealth Edison rolls the load on NDH taper freight bearings.

Commonwealth Edison's Joliet generating station is fed by *two* NDH-equipped, 126-car unit trains carrying coal. Rotary couplers are used on each car in a highly sophisticated dump control system. Dumping time: one minute!

## 600-mile round trip every 48 hours—America's busiest!

300 miles per day, 52 weeks a year! On a precision schedule! A rugged job like that calls for no-nonsense dependability . . . punctuality . . . top equipment! When you're carrying heavy loads at high speeds and rolling up six times the average daily mileage of older freight cars—you specify the very best journal bearing you can get.

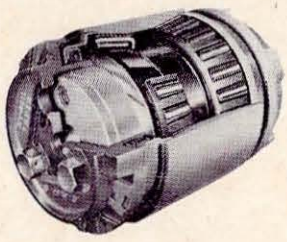
# NDH




# WITH A 12,600-TON CARGO

## NDH-equipped all the way!

Commonwealth Edison's low maintenance, 100-ton capacity gondola cars are equipped exclusively with 6½″ x 12″ NDH taper freight bearings. Commonwealth Edison's two unit trains will result in a savings of approximately $5 million a year! It pays to include New Departure-Hyatt bearings in your profit plans!



NDH NEW DEPARTURE · HYATT BEARINGS
DIVISION OF GENERAL MOTORS CORPORATION · SANDUSKY, OHIO

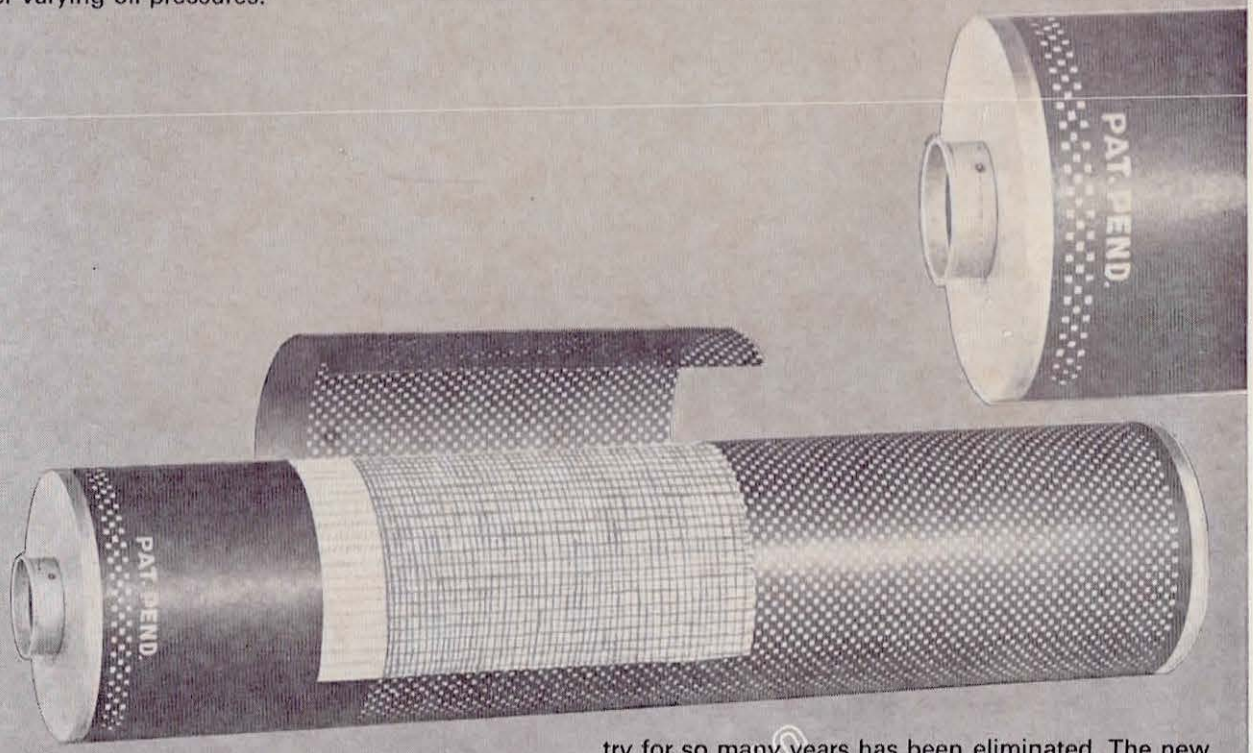
GM
MARK OF EXCELLENCE

# BEARINGS

# SUPERIOR announces

## The Entirely New Concept in Pleated Paper Diesel Filters with Patent Pending

The new filter is constructed so that the pleats are mechanically ganged and connected to a flexible mesh in such a way that all pleats are free to move in unison and maintain pleat separation at all times under varying oil pressures.




- No More Pleat Collapse
- Major Breakthrough in Filtration
- Pressures and Temperatures No Longer a Problem
- Longer Engine Life and Less Maintenance
- Full Flow Action at All Times— No By-Pass Problem

The new SUPERIOR Pleated Paper Diesel Filters represent the first major breakthrough in filtration since the conception of paper filters. The problem of pleat collapse which has plagued the railroad industry for so many years has been eliminated. The new design withstands the severest operating conditions without affecting filtering capabilities. Oil pressures or temperatures are no longer problems as the filters are designed to withstand greater pressures and temperatures than will ever be present in any diesel locomotive.

The new SUPERIOR Filters with patent pending will result in longer engine life and less maintenance. The filter assures Maximum Surface Area for Maximum Dirt Loading, Maximum Filtration for Full Flow Action and eliminates by-pass problems, resulting in Maximum Service Life.

For complete information on this New Concept Filter, write or phone

**SUPERIOR DIESEL FILTER CO.**

SUPERIOR FILTERS ARE SUPERIOR

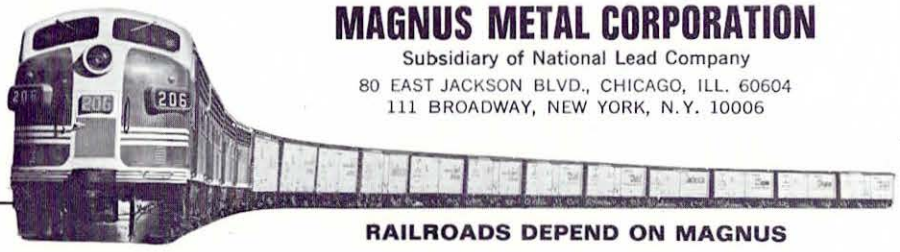
200 South Michigan Avenue • Chicago, Illinois 60604 / Telephone: Area Code 312/HA 7-4626

Circle 20 on reader service card

# Moving a Golden Sea... *on time*

Everyday miracle for America's railroads and the men who direct them.

BEFORE GRAIN can become bread... breakfast cereal... or food for the world... it must be *moved*. A vast sea of it and on deadline schedules. ■ Only the railroads can move so much, so fast, at such low cost. ■ Helping railroads meet tight schedules is MAGNUS, for more than 80 years a dependable source of bearings, journal box components and diesel parts of unsurpassed reliability. ■ As the need for more efficient transport of grains and other materials grows, MAGNUS, with its long-range research and development program, continues to work hand-in-hand with the railroads in developing new, improved products that will enable them to do their job more economically and efficiently in the future.




**MAGNUS METAL CORPORATION**

Subsidiary of National Lead Company

80 EAST JACKSON BLVD., CHICAGO, ILL. 60604

111 BROADWAY, NEW YORK, N.Y. 10006

**RAILROADS DEPEND ON MAGNUS**

Production increased
to meet demand

# Bruce Dura-Wood lasts longer

## AND SUPPORTS WHEEL LOADS UP TO 82,500 POUNDS

Many leading Class I railroads have used Dura-Wood for years. They report it far outlasts ordinary flat-grain vehicle-grade pine, fir and oak floors in freight cars. In some cases the ratio is 6 to 1. Special tests in the engineering laboratory of a leading university have proven Dura-Wood capable of sustaining lift truck wheel loads up to 82,500 pounds. Now is the time to reserve your share of Dura-Wood for 1967. Available in lengths, thicknesses and machining as specified. Call or write for full details.

**Why Leading Railroads specify Dura-Wood**

Dura-Wood is laminated edge-grain oak, pre-cut to size, easy to install. It gives a smooth end-to-end surface and provides better cargo protection (no shrinking, no gapping, no breakthrough).

BRUCE®

**Bruce DURA-WOOD Freight Car Flooring**

A product of E. L. Bruce Co., Memphis, Tenn. / World's largest maker of hardwood floors

Circle 21 on reader service card

# A good year—but how good?

**While the new year may not be a record-breaker of 1966 proportions, it will still go down as one of the best of the decade.**

Scratch a pessimist today, and you'll uncover an optimist who wishes he dared to be one on the outside, too. Explore the thoughts of a top railroad officer or a top railway supplier, and you'll probably find a layer of uncertainty lying atop a will of iron.

So far as 1967 is concerned, pessimism and uncertainty are in vogue, in business generally. The year shapes up as one loaded with imponderables.

As one eastern railroad's president sums it up, "anybody who makes a firm prediction on general business or railroad traffic for 1967 at this time is an out-and-out gambler."

Despite the imponderables, however—despite the complications and the contradictions—optimism isn't far below the surface, among many railroad men and suppliers. Why? In part, because there has come to be that "will of iron" which, to an increasing degree, will not permit negative thinking. If the power of positive thinking is all it's cracked up to be, railroads are in for another excellent year.

● **Good and bad co-exist.** Paradoxically, this excellence may co-exist with somewhat depressing answers to many of the key questions surrounding 1967.

—Will traffic and revenues be up? As usual, freight yes, passenger no.

—Will expenses go up? Sure—and probably at a higher rate than last year's 2.9%.

—What's the main pressure on expenses? Labor costs, pure and simple.

—So, will 1967 net income equal the $925 million brought down jn '66? Maybe—but probably not quite.

—Will freight rates have to go up? That's a good way to start an argument. But yes, some rates and/or charges probably will have to be increased.

—What's happening to capital spending? It's going down—but not by so much as some doomsayers predict.

—Is this the beginning of a trend—or the start of another "famine" in railroad buying? No.

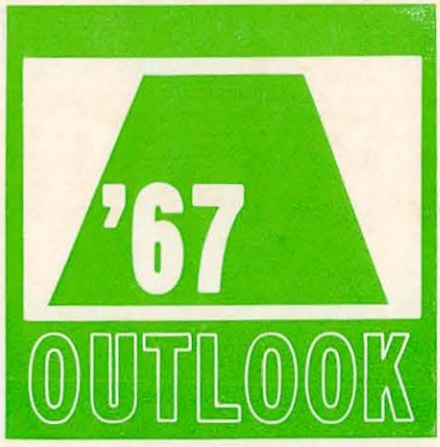
—Should railroads figure on setting new corporate-performance records each and every year? Well, try a little exaggerated reasoning: If Notre Dame last autumn had won its first football game by a modest 3-0, its second by 6-0 and its third by 12-0, and if the Irish had continued at the same pace, they'd have defeated their 10th opponent, USC, 1,536-0. Notre Dame was satisfied to win 51-0—and they still were ranked No. 1.

—So is 1967 shaping up as another record-breaking year for railroads? Not really, in the over-all.

—Does that mean disaster's in the offing? No.

● **How do you figure it?** So much for dialog. Exploration of the facts, opinions and guesses underlying it all turns up the reasoning which now appears logical.

First of all, the odds are in favor of '67 turning up with a new record high in revenue freight ton-miles. Railroads set a peacetime high in 1965, posted an all-time record (745 billion) in '66 and will almost certainly better that mark this year. But the rate of growth—6.4% in 1965, 6.7% in '66—may fall off somewhat in '67.




If the higher-traffic prediction holds up, total operating revenues should also inch ahead—despite probable cuts in passenger and mail-and-express revenues and despite the fact that over the past two years it's taken 6.4% and 6.7% increases in ton-miles to produce operating-revenue increases of 4.4% and 4.6%, respectively.

It's worth noting also that the 13 regional shippers advisory boards are predicting a 1.8% carloadings increase for first-quarter 1967—even though the shippers see cutbacks in a number of commodity categories, including grain and grain products.

● **Costs certain to go up.** If traffic and revenue increases look like a good bet, however, cost increases look like a sure thing.

Price increases will probably bring a boost in railroad spending for materials and supplies, even if the volume of purchases is no greater. But the big cost problem will be the cost of labor: It's getting higher. And, with general wage increases and fringe-benefit improvements a certainty, railroads are having a bad time trying to figure out where they can find offsetting savings.

On a percentage basis, the spread between increasing revenues and increasing costs is narrowing—and it's going to become an even-tighter thing this year. Wage increases amounting to 5% and benefit improvements adding another 1% or so are a fact for employees represented by several of the biggest rail labor organizations. Other unions, some of which may opt for emergency-board hearing of their demands, certainly will come out with no-less attractive settlements.

Over the period 1961-66, total labor costs went up by 7.8% while employment was declining by more than 12%. Total labor costs per employee went up by more than 22%. In '67, the problem gets even tougher: Per employee costs will go up by more than the 4.2% recorded in '66—and the opportunities for manpower cutbacks just aren't what they used to be.

● **Profits in a vise.** So revenues go up a little and costs go up a lot, relatively—and it doesn't take a graduate economist to guess what happens to profit.

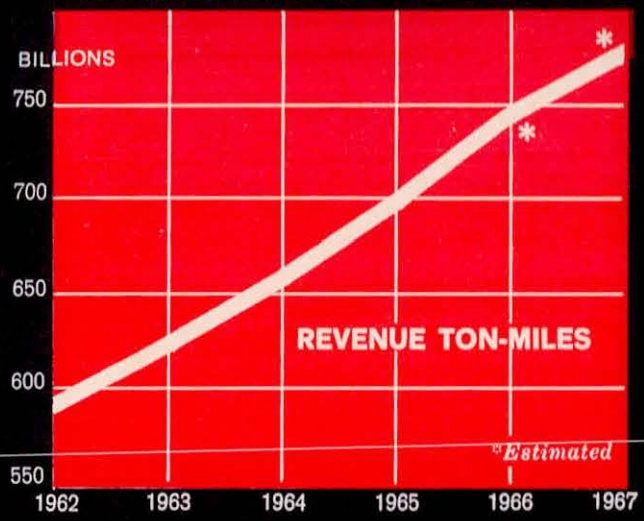
East, West, North and South, this squeeze is the big worry of '67. Here's a sampling of top-level opinion:

—"The most serious problem facing us is the severity of the profit squeeze. Added costs resulting from wage increases and higher taxes to be paid under the Railroad Retirement Act could easily offset any revenue gains and gains in productivity." *H. T. Watkins, Jr., vice president, Chesapeake & Ohio/Baltimore & Ohio.*

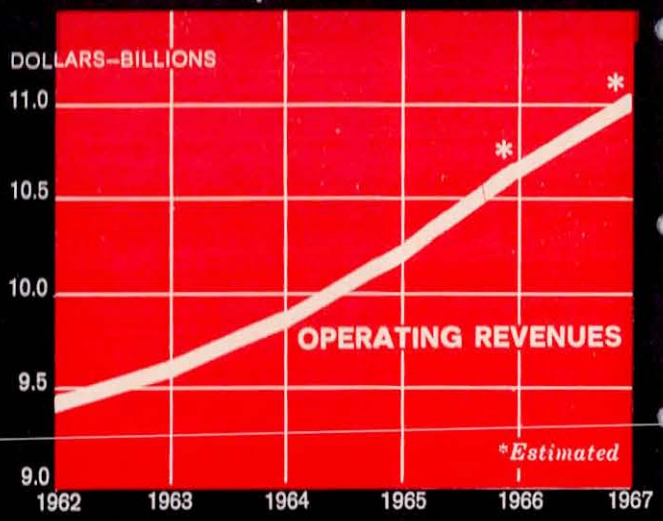
—"Profit margins are bound to narrow, as labor costs continue to mount and the opportunities to economize continue to diminish." *Edd H. Bailey, president, Union Pacific.*

# The five-year story—and a look ahead

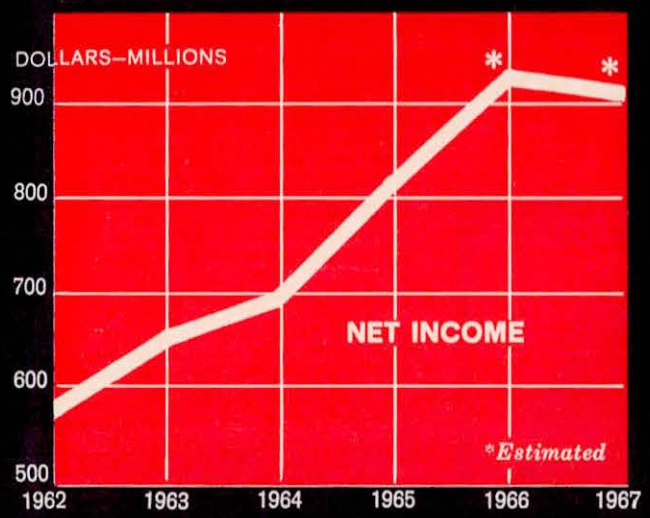
**Business is better...**




**revenues are up...**



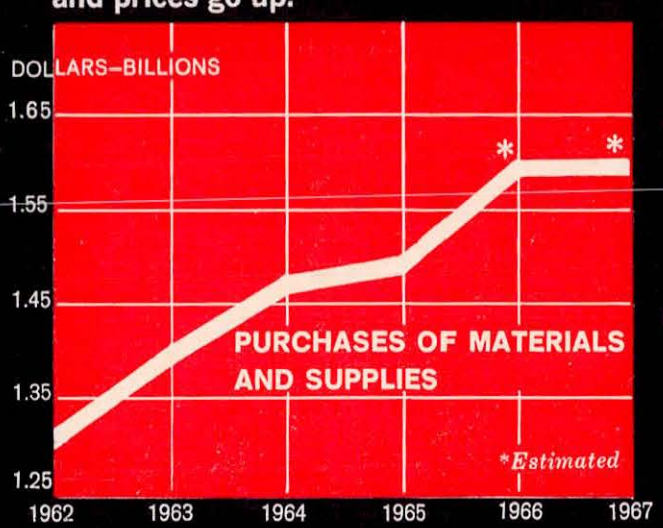

**so is net income.**




**But expenses also rise...**

**as labor costs increase...**

**and prices go up.**



# Incentive to upgrade equipment remains high

—"It appears likely that the economy will continue at approximately the same level through 1967. But the industry, faced with increased labor costs, as well as with the perennial problem of restrictive legislation and the probability of increased taxes, must look internally for relief." *Louis W. Menk, president, Northern Pacific.*

—"It does not seem realistic to anticipate completely offsetting heavier expenses by increased revenues. In these circumstances, it is most important that every member of the railroad industry intensify his efforts to unearth new means of effecting economies and achieving greater efficiency in operations." *John W. Smith, president, Seaboard Air Line.*

—"The opportunities for savings in labor through increased efficiencies are much fewer than has been the case in the past. Other areas of savings must, therefore, be more thoroughly explored." *J. P. Hiltz, Jr., president, Delaware & Hudson.*

—"Increasing costs in material and wages will undoubtedly more than offset any increased revenue from the higher volume of freight traffic expected. This will necessitate even greater effort toward cost-saving procedures in order to try to maintain an earnings level comparable with last year." *Stuart Shumate, president, Richmond, Fredericksburg & Potomac.*

● **What happens to rates?** With all this concern about the revenue-expense squeeze, it's only natural that people start thinking about raising prices, as one way of keeping a decent balance between income and outgo.

Nobody wants a rate boost. Shippers are the most vociferous in their opposition, but the fact remains that railroad officers—proud of the 15% cut in average ton-mile charges since 1958—are uniformly hesitant to increase charges. Some are flatly opposed. But, it may be hard to argue with the comment of Santa Fe Chairman Ernest S. Marsh: "We would be very reluctant to enter into a general freight-rate increase—yet it is becoming increasingly difficult to hold the price line when we are confronted with not only increased wage expenses but also increased costs for virtually every commodity or service which we buy."

NP President Menk shares the concern: "I'm confident that every effort will be made to hold the line on rates. But this may be impossible, especially if freight-traffic volume does not increase during 1967. . . . There will be great pressures for a freight-rate increase as a result of higher wage costs, and it's doubtful if even selective rate increases can be avoided."

● **Squeeze on capital.** The profit-squeeze doesn't have much to do, directly, with capital-spending plans. Several other factors account for the estimate that there will be a pullback from the record spending, $1.9 billion, of 1966. In each of the past three years, however, capital expenditures have run about double net income—and the end of 1967 may not see too much variation from that rough relationship.

The big question, at this point, is the freightcar question: Railroads and private car lines installed close to 200,000 new cars in 1965-66—but will they come close to that average in '67?

Estimates are so far apart that they inevitably will prove somebody not just wrong but dead-wrong by Dec. 31, 1967. And, at the moment, the high estimates look like the better ones—despite tight money, despite loss of the 7% investment tax credit for the year, despite the tremendous improvement of the car fleet that's already taken place.

Pullman-Standard Vice President and General Manager George L. Green has one of the most optimistic forecasts—100,000 new and rebuilt cars in '67, or about the same number delivered last year.

Green may be right, and he may not. But his reasoning, most observers would say, is right on the button: "When it comes time to calculate whether it's more profitable to use outmoded equipment that produces little revenue, merely because the tax credit has been suspended, or to reach out for new, money- making rolling stock with possible returns of 30% or more revenue, the decision to upgrade looks favorable."

● **Making the 'big play.'** Or, to be even more blunt about it, railroads are not about to go into a shell, pass up busines, take a chance on losing traffic to the competition. They're going to continue to make the big play—the improvements that carry the potential for return.

Suppliers and shippers alike, however, may be excused for having a certain feeling of foreboding when they read the figures on improvement programs already announced. Illinois Central plans for record spending, Burlington will be up—but most roads say they'll spend less. Santa Fe, Missouri Pacific, Norfolk & Western, Pennsylvania say they now figure to cut spending by quite a number of millions.

Under the circumstances, it might be forgotten by some that Santa Fe has spent more than $750 million on improvements since 1960; that Missouri Pacific has spent about $345 million since '61; that N&W has been making one operating property out of many; or that Pennsylvania has put close to $500 million into capital improvements in just three years.

Under the circumstances, it might also be possible for some to forget that many roads—perhaps a majority of the big ones—have shown a consistent pattern of understating expenditures in what might be called pre-season prognostications and later boosting spending as need dictated. This is one big reason for the wide variation in total-spending estimates for '67—estimates which now run from $1.5 billion or less to $1.7 billion or more.

● **Government's role.** As for government policy as an influence on railroad planning, there's no doubt that totals are lower than they might have been had not the investment credit been suspended (and had not penalties been attached which affect carryover credits of companies which continue to spend big).

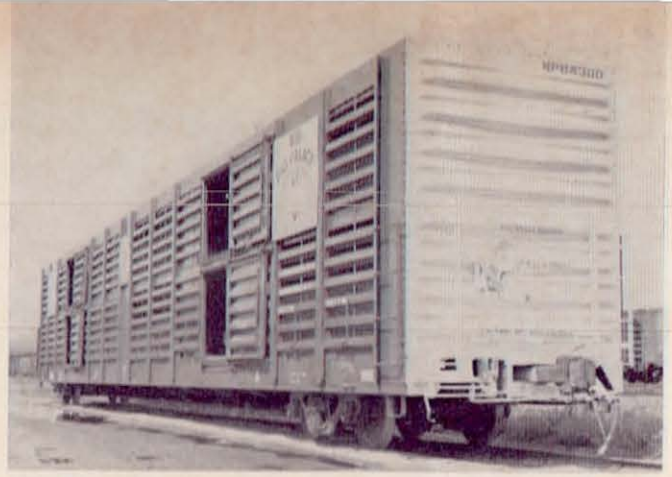
For the first half of 1967 at least, there's no cause for railroads, suppliers or shippers to worry about equipment. Freight-car assembly lines will be busy through June and perhaps beyond with carry-over and new orders, and deliveries will remain high.

● **More up's than down's.** If, in a general way, there has to be a summing-up, in advance, of the new year, it might read like this: Railroads will continue to show improvements in operational efficiency. Labor costs will go up, and revenue increases won't entirely offset these expense increases. Net income may suffer, but probably not by much. Capital spending will go down, but also not by much. Rates may go up, at least on a selective basis. And railroads will at the least maintain their share of total intercity freight business, which stands at slightly above 43%.

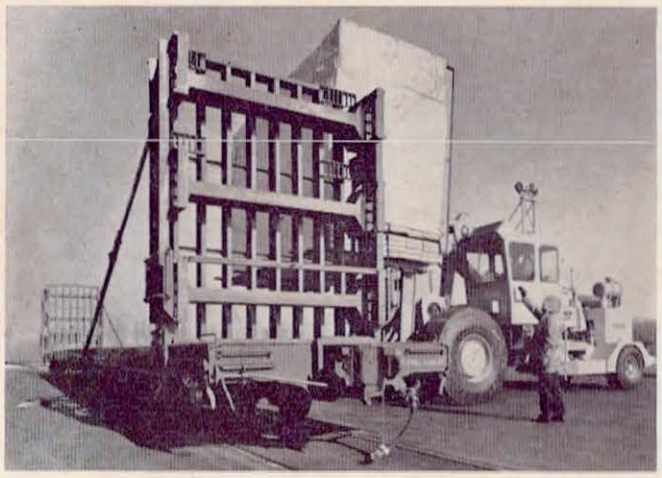
Slice away, scrub away the surface of uncertainty, and '67 shapes up as a good railroad year—perhaps not quite so good as '66 was, but certainly better than almost any other previous year.

And it's a broadly-held opinion, which Seaboard's John Smith puts forth: "While '67 may bring more than a normal complement of problems, railroads have weathered troublous times in the past. I firmly believe we have the ability and ingenuity to meet successfully the challenges." ■

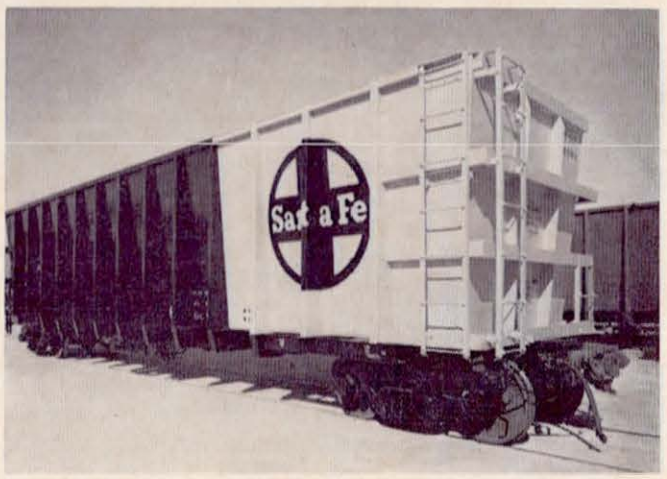
**Large capacity**
Interchange cars of 150-ton capacity were built for Monsanto by ACF; the 37 tankers are handling elemental phosphorus.



**High cube**
To market go 325 hogs in each of 22 new NP stock cars built by Ortner; road's competitive position is enhanced.



**Simplified handling**
Lift-truck handling of packaged building materials is easier, cheaper with 91 bulkhead cars built by P-S for Insulite.

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'67 OUTLOOK

By F. N. HOUSER, Associate Editor

# Accent is on specialized cars

Carbuilding's primary 1967 problem is 1966. In old-time vaudeville terms, it's a tough act to follow. Spending for new cars in 1966 set a record, while the number of units ordered topped anything in the previous decade.

So now, if new freight cars ordered in 1967 should drop by 20,000 compared with 1966, the decline might seem substantial. Yet, spending would be far over $1 billion and this would be the fifth straight year in which there have been orders for more than 60,000 cars. Carbuilders and railroad shops have not seen comparable production stability since the 1920's.

● **About 75,000 cars.** It seems probable that at least 75,000 cars will be ordered during 1967. Most railroads are far from pessimistic. Although their car-acquisition programs are assailed by financial and political problems, railroads are not confronted with the traffic declines which have usually cooled their car-buying fervor in the past. Return on investment in specialized cars of 30% or more is an incentive overriding any penalty imposed by higher taxes and interest.

And current uncertainty does not find carbuilders particularly bearish about the outlook. Car-plant expansion programs are going ahead with but few exceptions. After six years of a steadily increasing tempo, 1967 seems destined to be a bit of a breather—quite possibly a year during which carbuilders' resources can be marshalled for a very busy 1968. *(Continued on page 40)*

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**"1967 is going to be a bright year for the two-fisted salesman and a dim one for the complacent order taker."**

Certainly, even with some slackening in new-car spending, 1967 will be far from the carbuilding disaster which was predicted in certain quarters only three months ago when the fight was waged to exempt railway equipment from the now-suspended 7% investment credit. Instead, says one carbuilder executive, "1967 is going to be a bright one for the two-fisted salesman and a dim one for the complacent order taker." Says another: "We believe there will be sufficient business to maintain competent and established carbuilding facilities."

● **Short-term problem.** There seems to be no question about long-term prospects for the building of freight cars. They are extremely bright. The question is the immediate future. "In today's economy," says Thrall's C. H. Wright, vice president-sales, "one must take into consideration the political climate as well as the economic. As a result, you could read either prosperity or recession at this time. We feel that, before forecasting with any reasonable accuracy, we should wait until February, as the U.S. is going through a shakedown period both politically and economically."

Says Henry A. Correa, ACF executive vice president: "Prospects for the carbuilding industry for 1968 and 1969 can be evaluated with more certainty than for 1967. Outside influences such as high interest rates, suspension of the 7% investment credit, possibility of higher corporate and personal income taxes, and the uncertainties of the Vietnam conflict have made near-term forecasting all but useless.

"Indicators do point at the present time to a short-term production lag in the last half of 1967 for standard cars, with special-purpose cars less affected," explains Correa. "This year should produce only a temporary interruption in carbuilding. At best, the industry's order backlogs, which stretch generally into late spring and early summer, may serve to bridge order slowdowns."

● **Temporary lag.** Several builders report that there has been a drop in inquiries for new cars and cancellation of some letters of intent which serve as reservations for plant production capacity. "It appears that some railroads are more concerned with the tight money market than with the suspension of the 7% tax credit," observes R. E. Hallberg, vice president and general manager of North American Car.

Hallberg adds that some railroads are again taking a look at finance leasing as a method for obtaining new cars in 1967. Sheldon Kaplan, corporate vice president of Evans Products, concurs, adding "many cars will be leased to both industry and railroads, which will take some of the sting out of the investment-credit suspension."

● **What will happen?** The attitude and actions of Washington toward the railroad industry still will probably be of prime significance in the outlook for car ordering and car building a year from now, according to Pullman-Standard's George L. Green, vice president and general manager. Green sees the establishment of the Department of Transportation going "a long way in aiding the nation's carbuilders and railroads in getting their story to the proper authorities on the federal level."

## Penalties on financing

Along with the loss of investment credit, Green notes that increased labor costs and the tight money situation "penalize railroads seeking to finance purchases of equipment." Pullman-Standard, however, bets "on a growing industry, even though the railroads and those associated with them are going to have to pay a somewhat higher price than expected to attain that prosperity."

● **The good fight.** "Railroads have fought hard to bring their car fleets up to date," says Greenville Steel Car's G. C. Brecht, vice president. "Their willingness to do this has been important in keeping materials flowing to the docks and on to Vietnam. We look forward to a change in the government's investment credit attitude very shortly. Any long-term continuance of the suspension would only wipe out the hard-won increase in our national transportation capabilities."

Just how well railroads have succeeded in enhancing their transport capacity is attested to by a recent statement of V. F. Caputo, director of transportation policy for the Department of Defense. "The railroads are one mode of transportation with which the Department of Defense has no problem," said Caputo. "The railroads are simply doing the finest job of all modes of transport Defense uses."

Many other shippers have been somewhat less enthusiastic about railroad performance, although most concede the damaging effect of the investment credit suspension. After railroad's installations outstripped retirements by 20,000 cars last year, R. W. Buck, new president of the National Association of Shippers Advisory Boards, sees ahead a period of "comparative stability" until 1970, with new and rebuilt units just about balancing the retirements.

Despite enourmous sums expended in recent years, the car fleet has inched up only a miniscule 2%. As one shipper summarizes: "The fact remains that the railroads' car fleet is inadequate to handle the nation's needs. This, plus the possibility of substantial return on investment in new cars, particularly specialized equipment, should encourage ordering."

● **When to do it?** In the face of the universally recognized need for increasing the freight-car fleet, it now appears that some new-car building capacity, available even late in this quarter, will go unused. And unless there are volume orders, some carbuilding facilities could be operating at a low pace by the second quarter. If carbuilders were forced to suspend any substantial operations, the immediate effect would be loss of skilled employees; the longer-term consequence could be a three- to six-month lag before it would again be possible to achieve full production.

J. M. Gleason, general sales manager of General American, reports his firm is booked into the second half of 1967. J. L. Ortner, Jr., vice president of Ortner Freight Car Co., expects dollar volume and the number of units this year to be comparable with 1966. Pullman's George Green says that after P-S's most productive year in its history in 1966, he sees a good chance for 1967 to be comparable. Evans Products will produce more cars this year than last and is booked well through the last half.

Most builders expect 1967's cars to be much like those built in 1966—both on the basis of capacity and of design. After a rather spectacular climb in per-car capacity over the past few years, it is now generally conceded that there will probably be a leveling off.

Pullman-Standard believes that the capacity limit has been pretty much reached for box and other general-purpose cars because of the physical limitations of rail and bridges. Observes P-S's George Green: "A breakthrough in these cars will come when carbuilders research and design lightweight equipment that will set off a new freight-car revolution."

Evans' Kaplan explains that while one railroad has taken 125-ton Evans cars, most others will not now go beyond 100 tons. "No railroad wants to

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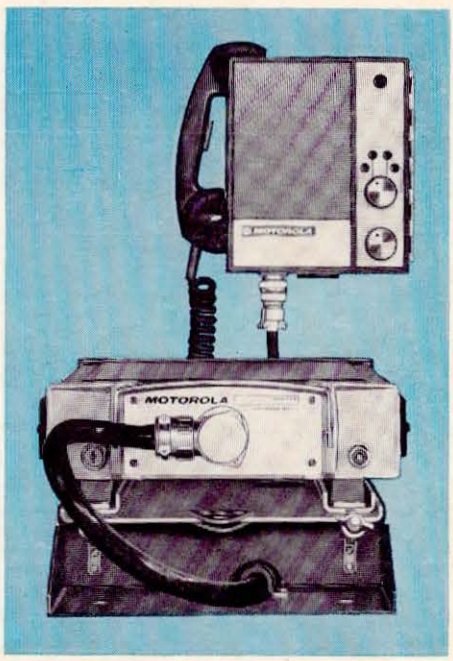


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# New emphasis on equipment for intermodal use

buy a car which cannot be used in interchange throughout the country," he adds. J. L. Ortner, Jr., doubts that "for a few years at least" most individual car capacities will go beyond 125 or 150 tons. North American will continue to build some four-axle 125-ton tank cars and anticipates that, over the next two years, "small numbers" of six- and eight-axle tankers will be built.

● **The specialized car.** "Still greater emphasis is being put on the idea of a special car for handling a special commodity," observes R. Van Hassel, Magor vice president and general manager. ACF sees technical advances in rolling stock in 1967 being "primarily refinements and improvements rather than radical departures, with emphasis on increased size and added weight-carrying capacity."

Orders at Evans Products will continue to run to 50-foot box cars, 100-ton coil-steel cars, and 70- and 100-ton flat cars with bulkheads. The Evans "building products" flat car with two movable bulkheads (RA, Sept. 19, 1966, p. 47) will go into production late this year along with the integral-hood coil-steel car. Greenville, while doubting that there will be further significant increases in the present top sizes of box cars, sees demand for other longer cars, notably gondolas.

Pullman-Standard, matching last year's production pattern, will be building primarily high-cube covered hoppers, piggyback equipment, and 86-, 60- and 50-foot box cars of 100- and 70-ton capacities. Ortner will be turning out 100-ton gondolas, hoppers and bulkhead flat cars.

● **The piggyback role.** The trailer/container outlook for piggyback operations appears extremely bright, showing little, if any, effect of higher taxes and interest. Great Dane Trailers sees its railway sales volume for 1967 up approximately 10% over 1966, with approximately 40% of its total output now going to railroad customers. Dorsey Trailers reports that railway sales represent 35% of its volume and sees them continuing strong this year. Fruehauf expects its railroad-oriented sales to be up 20% and adds that they represent a substantial and increasing proportion of its total output.

While railroads continue to buy primarily the 40-foot trailer and container, over-the-road transportation is showing increasing interest in the 45-foot trailer as more states legalize its use. Dorsey noted that its volume in the shorter "doubles" (tandem-operated) trailers increased fourfold in 1966, compared with 1965. Fruehauf says there is "some slight movement" toward both the longer 45-foot and the shorter "doubles" models.

H. E. Foulkrod, senior executive vice president of Fruehauf, says that "one of the most significant things occurring is a greater coordination between railroads and steamship lines in their movement of freight." In 1967, he believes, there will be an acceleration of this trend with emphasis on equipment suited for intermodal service.

● **Leasing operations.** Leasing, whether it be for trailers or freight cars, appears to be on the upturn. ACF notes that, as a major car lessor as well as manufacturer, it sees the railroads' fundamental need for special-service rolling stock resulting in greater leasing activity than could have been predicted even a short time ago. Fruit Growers Express and associated companies, which operate a diversified fleet of freight cars and trailers for perishables shippers on 65 contract railroads, is experiencing growing demand for units.

## Leasing is growing

REA Leasing Corp., now six years old, operates 9,000 trailers in a national pool for railroads. Reports Palmer Bayer, vice president and general manager of Realco, "1967 business volume should show about the same level of increase as 1966 during which the fleet was increased from 5,400 to 9,000 units."

● **North of the border.** Canadian carbuilders, unassailed by the same political problems as those in the U.S., are expecting to do very well. Hawker Siddeley anticipates full production throughout the year, with some facilities already booked until November and additional car orders in the offing.

"The majority of cars Hawker Siddeley has been building have been 100-ton models, and this trend will continue," says R. S. Wilson, general sales manager. "There is no indication that cars of larger than 100 tons will be ordered in Canada in the near future."

● **Put up . . . not shut down.** This is the year when the appraisal of new equipment for medium-distance passenger services begins. In short, the year when new equipment is being put up rather than having the services shut down in both the U.S. and Canada. CN will soon be getting the turbine-powered United Aircraft lightweight trains for its Montreal-Toronto runs.

In the U.S., federally financed demonstrations with electrically powered, multiple-unit equipment on the Pennsylvania and with turbine-driven trainsets on the New Haven will begin this year. While it is generally conceded that the outlook for commuter and rapid-transit equipment is bright, the response to the operation of the intercity equipment now on order will do much in making or breaking such operations.

Budd, Pullman-Standard and United Aircraft see relatively little future for traditional long-haul passenger services. Most attention will be directed at the U.S. Northeast Corridor and a similar region between Montreal and Toronto served by Canadian National. W. L. Sheppard, vice president and general manager of Budd's Railway Division, says that if the Northeast project succeeds, it will stimulate an interest in better service between other cities.

● **Systems approach.** Success of the Northeast project, according to Sheppard, will depend on factors such as

—Equipment performance;
—Schedules, frequency and speed;
—Promoting the service.

This is what United Aircraft chooses to term "systems solutions." "Turbo trains for the U.S. Department of Commerce and Canadian National," explains UA's Shatz, "were designed from the rail up to satisfy more passengers and to permit the railroads to make a reasonable profit on the service."

W. Van der Sluys, general manager of Pullman-Standard's passenger-car engineering, notes that the major factor in making the present passenger equipment developments more successful than the lightweight trains built a decade ago is the prospect for adequate financing to promote continuing programs for eliminating problems and selling the service to the public.

Budd's Sheppard calls "most encouraging" for the passenger-car industry not only acquisition of much needed capital equipment under the Mass Transportation Act of 1966, but the research and development programs made possible through the High-Speed Ground Transportation Act of 1965. "Most successful industries owe their growth to research and development work of past years," he concludes.

But, says UA's Shatz, "the future must be a period of joint effort between government and private industry. Railroads and manufacturers who rely strictly on government R&D support alone will lag behind their competitors in the years ahead." ■

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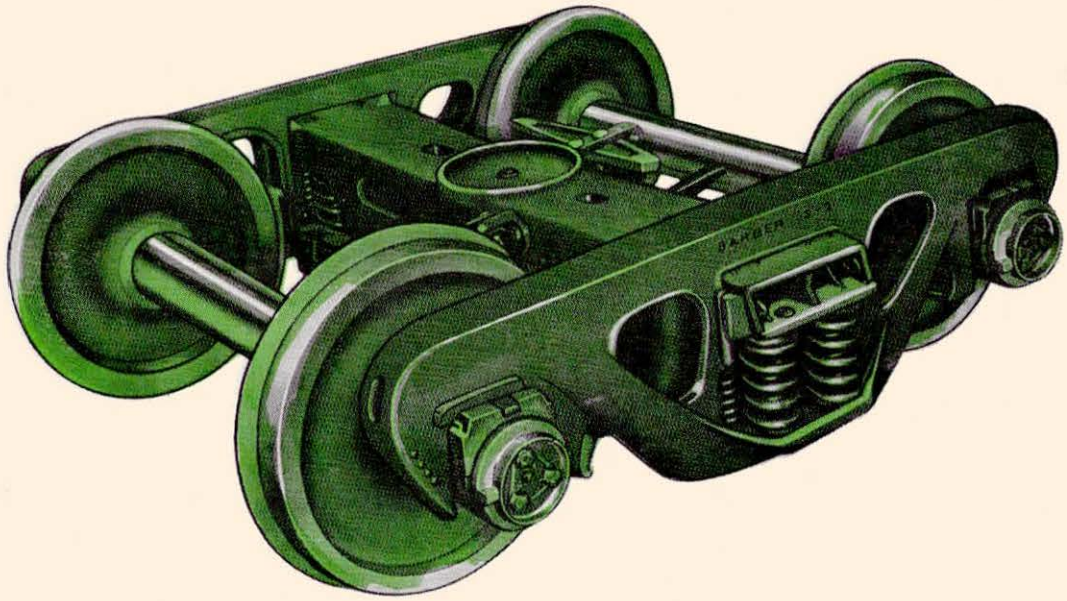

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'67 OUTLOOK

By C. L. COMBES,
Mechanical Editor

# Diesels: A good year ahead, but under '66

**Slight slowdown in diesel replacement programs expected after railroads acquired horsepower at near record rate in 1966.**

Railroads wanted both speed and pulling capabilities in their 1966 locomotives—and they got both. In 1967, they will add more of these versatile models to their fleets, probably at a slower pace. Last year was an excellent one for the builders; 1967 will be a good one.

More powerful 1966 units with wide-range characteristics went into service in numbers sufficient to crowd the total horsepower acquisition of any previous year. Numbers do not tell the story. When the final count for 1966 becomes available, the number will be in the 1,400 to 1,500 range, about the same as 1965. But horsepower per unit jumped substantially. Most locomotives delivered in 1966 were in the 2,800- to 3,600-hp range, compared with 2,500- to 2,750-hp models that reached the rails in 1965.

• **Fewer, more powerful units.** Available data for the 1961-1965 period reflect the trend in diesel-electrics. The total fleet dropped from 28,240 to 27,433, or 807 units, about a 3% decrease in the five years, but the total tractive effort of the fleet went down only 0.3%, from 1,733,527 to 1,728,421 thousand pounds.

This trend will continue as railroads replace old 1,500-hp units with locomotives of at least twice the horsepower and with added adhesion and tractive effort characteristics.

• **Motive power highlights.** Significant developments in the locomotive field in 1966 were the:

—Demand for six-axle models.

—Interest in higher horsepower single-engine units.

—Performance of ac-dc transmissions.

—Acquisition of remote-control systems.

—Refinement of automatic locomotive testing.

These developments will continue in 1967 as builders and railroads improve both the design and performance of the models that went into service for the first time in the past year. In addition, a new model or two in the more than 3,000-hp class may be expected.

• **Six-axle story.** In less than three years the six-axle designs have zoomed to popularity, not to anyone's dismay, although it is suspected the builders were caught a bit flat-footed by the demand. Coupled with the demand is the interest in greater horsepower in single-engine designs. This point is emphasized by Electro-Motive's six-axle 3,600-hp SD-45, which accounts for more than half of its current orders.

There is a two-part story in the six-axle design. The approximately 50% more tractive effort that the six-axle can deliver in comparison with its companion four-axle model of the same horsepower is why railroads operating through heavy-grade terrain have a special interest in the design. An added bonus and an important one, that could be attractive to even railroads operating over relatively flat country, is the six-way distribution of energy through the traction motors.

The traction motor is a critical component in the diesel-electric's transmission. Limited in physical dimensions by its location on the trucks it must deliver the engine output over a wide speed range. It is called upon to handle only a maximum 500 horsepower in the six-axle, 3,000-hp design, and a maximum of 600 horsepower even in a

## Horsepower and flexibility feature EMD's line

Southern Pacific train is powered by the most powerful single-engine diesels, EMD's six-axle, 3,600-hp SD-45s.

First EMD SW-1500 unit on Indiana Harbor Belt can handle both freight and switching assignments.

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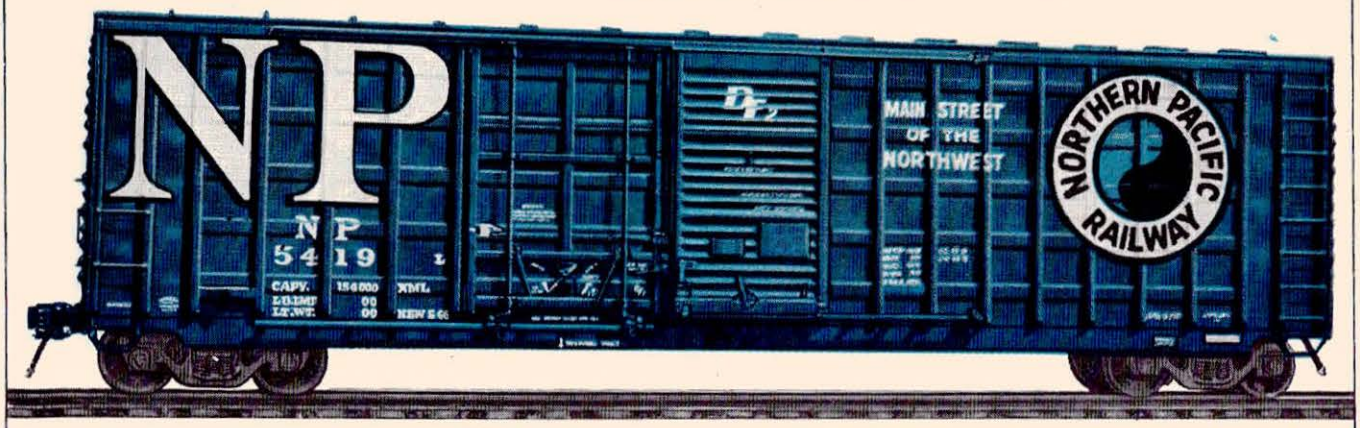
This recessed belt rail single-sheathed car side assembly combines many dreams of International Steel's Product Development Center, now established as a separate entity within the company. Its title tells its prime activity: "Product Development."

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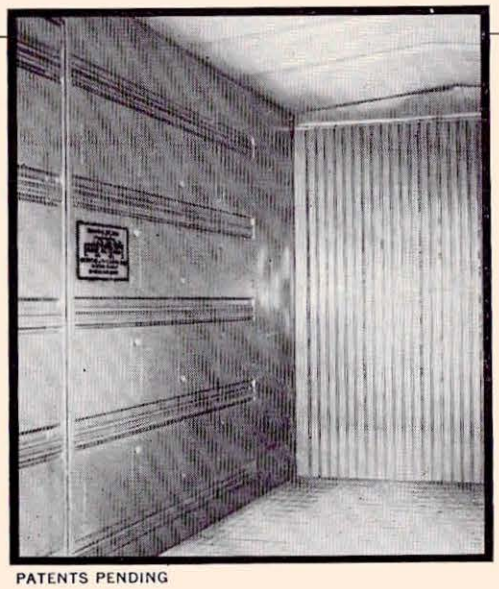

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# RRs like performance of six-axle ac-dc designs

3,600-hp locomotive. But a four-axle 3,000-hp locomotive delivers up to 750 horsepower through each traction motor, an output considered by many to be pushing the limits of present traction motor design.

● **Alternator-rectifier performance.** Although a few production models with the ac-dc transmissions were first introduced in 1965, large numbers of these locomotives did not go into service until early 1966. Initially, there was considerable trouble with some alternators and rectifiers but these deficiencies have been cleared up. Most railroads like the new transmissions and some have not even had a power diode failure in months. One eastern road liked the alternator-rectifier combination so well that it insisted on getting the transmission in a model not designed with this power arrangement.

● **Remote-control systems.** A signicant number of radio-controlled unattended locomotives went into mainline service last year. The Southern pioneered in the development of this system, but now several railroads have similarly-equipped locomotives either in service, under test, or on order. Remote control has the potential to improve train handling because it permits more efficient power distribution and air brake handling.

Most remote-control mainline locomotives are equipped with Locotrol, the system produced by Radiation, Inc. But Westinghouse Air Brake has its RMU (Remote Multiple Unit) system under test and development and General Railway Signal's TMU (Train Multiple Unit-er) coupler-control system has been under test and development during the past few years. Unofficial word is that GRS now has a system under test combining radio elements with coupler-sensing elements, a combination that could have certain advantages in train operation.

The Pennsylvania made the news when it utilized its Locotrol-equipped units to move a 300-car, 30,146-ton ore train from West Morrisville, Pa. to Altoona, Pa. (RA, Nov. 7, 1966, p. 30). This was an experimental movement but it demonstrated the inherent possibilities in synchronizing both power and braking functions of locomotives distributed throughout a train.

As with much new equipment that comes "under fire" of tough railroad requirements, some "bugs" have developed in these systems. Both the railroads and the manufacturers are concentrating on eliminating the deficiencies and improving equipment reliability.

● **Automatic locomotive testing.** With the greater complexity of the new locomotive electrical system it is not surprising that railroads are seeking to adapt space-age electronic equipment to maintenance procedures. Such equipment, under development for the past few years, is now being perfected. It is capable of detecting not only existing and potential failures in the electrical system but in mechanical components as well.

In reporting on equipment of this type at its 1966 annual meeting, the locomotive Maintenance Officers Association indicated that the equipment could test a locomotive's electrical system in one hour, compared with the 120 hours an electrician would require to conduct the same type of tests manually.

● **EMD sales set record.** Establishing an all-time divisional high, Electro-Motive Division's sales in 1966 were 21% above 1965. In a year-end statement to Railway Age, B. B. Brownell, vice president of General Motors and general manager of Electro-Motive, said, "Total sales exceeded that of 1951, our previous record year, by 8%. In 1951, the American railroads were busy replacing steam engines with diesels. In that year, we delivered some 3-1/2 million horsepower."

● **Over 3 million new hp.** "In 1966, we delivered over 3 million horsepower. Spread over fewer units, this horsepower will do as much, or more, work as that delivered in 1951. Meanwhile, due to economies of our replacement plan and increased capacity of today's locomotive units, the U.S. railroads will save $80,000,000 in lower capital investment on the horsepower delivered in 1966, compared with that delivered 15 years ago.

"In addition, because of improvements in all major components of the locomotive—coupled with the fact fewer units are doing equivalent work—the railroads will save $20,000,000 a year in lower maintenance costs over the 15-year life span of the 1966 models, compared with the locomotives they purchased in 1951."

● **SD-45 demand high.** Brownell

Santa Fe passenger locomotive is the General Electric's six-axle U28CG with steam-heat boiler.

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Pennsylvania freight service got 20 General Electric six-axle U28 and U30 locomotives last year.

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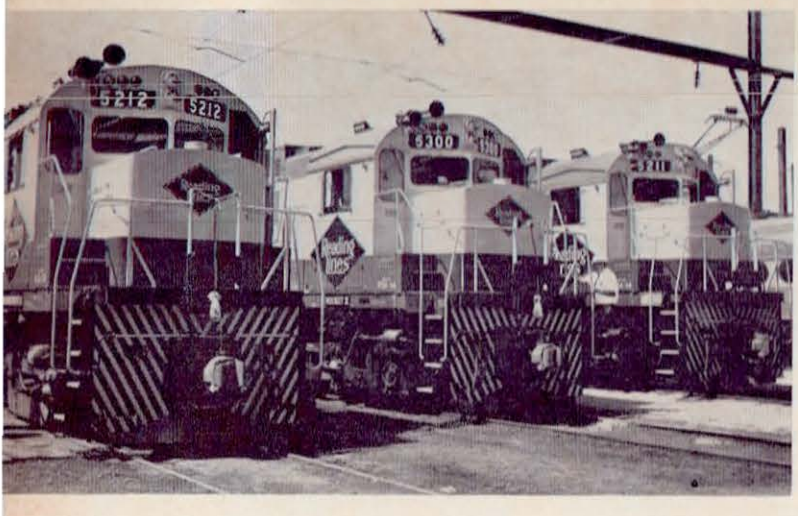

Century 415 demonstrator on the D&H is a versatile 1,500-hp unit with center-cab visibility.

## Alco line covers full range.

First Alco Century 430 locomotives went to Reading, are shown here flanking one of the road's Century 630 units.

credited acceptance of Electro-Motive's new "40" series locomotives which went into production at the end of 1965, as the "most important factor in the record sales volume" and cited the 3,600-hp, six-axle, six-motor SD-45—introduced last May—as a vital element in the continued advance of domestic locomotive sales.

"Powered by the 20-cylinder version of our new 645 series diesel engine, biggest engine ever made by Electro-Motive, the SD-45 now accounts for more than 50% of the division's current domestic locomotive orders," he said. "This is a tribute to the locomotive's outstanding versatility and broad range characteristics."

● **Expects some slowdown.** Looking ahead to 1967, Brownell indicated that "cautious optimism" typified the current outlook. Most economic forecasts, he pointed out, indicate the Gross National Product will top $790 billion, an increase of 7% over 1966. This compares with a gain of some 8.5% for 1966 over 1965. Thus, a slowdown in the national economy, but not a recession, can be expected.

"There are certain areas of indecision," he continued. "The suspension of the 7% investment tax credit and other anti-inflationary measures of the Administration in Washington no doubt will cause some railroads to pause in their capital equipment programs. The tight money market and accompanying high interest rates offer another sales deterrent.

"Offsetting these factors to some degree, however, are the competitive forces built up by progressive railroad managements in their quest to win back significant tonnages to the rails, plus the inherent and compelling economics of our locomotive replacement program."

● **Looks for good first half.** Meanwhile, Brownell pointed out that a substantial portion of 1967 domestic locomotive business was placed prior to enactment of the legislation suspending the tax credit and thus was not affected by the suspension.

"In summary, we expect 1967 to be a satisfactory year, with the first half, at least, approaching the record levels established in 1966."

● **Nearly 1,000 GE units in service.** O. F. Vea, general manager of General Electric's Locomotive and Parts Department, Transportation Systems Division, said, "An even greater number of modern locomotive units was put in service in 1966 than in the previous year. Sharply reduced operating cost per unit, higher monthly mileage, and greater speed from higher horsepower per axle, continue to contribute to improved revenues and profit.

"The number of GE high-horsepower units on order or in service on United States railroads is approaching 1,000. The GE fleet has accumulated over two hundred million miles, with some units having operated one million miles.

"Interest in product innovation continues. But with many consists operating at an optimum number of units for reliable through-service, there was increased emphasis on high availability and reliability. Flexibility was also stressed by many, to permit matching of locomotive consists to train tonnages without excess power. The majority of our production was for high-horsepower, four-axle units.

● **Electrification attractive.** "Looking ahead to the possibilities for improved transcontinental service, with higher speeds and reduced transit time, main line electrification is attractive, particularly with the interest and cooperation of the electric utilities," Vea said.

● **Alco sees no major cutback.** Alco Products, Inc., a subsidiary of Worthington Corporation, expects railroads to continue modernizing their locomotive fleet in 1967 at a somewhat slower rate than in the two previous years.

William F. Lewis, Alco's chairman and president, in a special statement to Railway Age, said, "Suspension of the investment tax credit and the prevailing interest rates are the factors that make forecasting difficult. However, we don't foresee any major or prolonged cutback in expenditures.

"Some studies published recently predict capital expenditures by the industry of approximately $1.7 billion in 1967, a drop of about 15% from the 1966 figure of over $1.9 billion. In our opinion, this represents the worst that could happen, particularly as regards locomotive purchases.

● **Inventory of old power high.** "We feel that way mainly because of the composition of the industry's locomotive fleet and its relation to the competitive situation. Although railroads have spent more than $1 billion on locomotive modernization in the past five years, the bulk of the fleet still consists of older, high-maintenance units obtained in the post-war conversion from steam to diesel power.

"The higher horsepower diesels introduced by Alco and other builders in recent years have demonstrated their greater efficiency, and now account for the vast majority of domestic locomotive sales. The trend to higher horsepower will continue, we believe, and Alco has stepped up its research and development work in this regard.

"During 1966," Lewis concluded, "Alco further broadened its line of modern motive power by introducing the 1,500-hp Century 415 utility locomotive—which has attracted wide interest in the industry—and by making initial deliveries of the four-axle 3,000-hp Century 430. We also completed development work on a new high-adhesion, two-axle truck that will be introduced in 1967. Evaluation continues on the three 4,300-hp diesel-hydraulics that have been in service for about two years." ■

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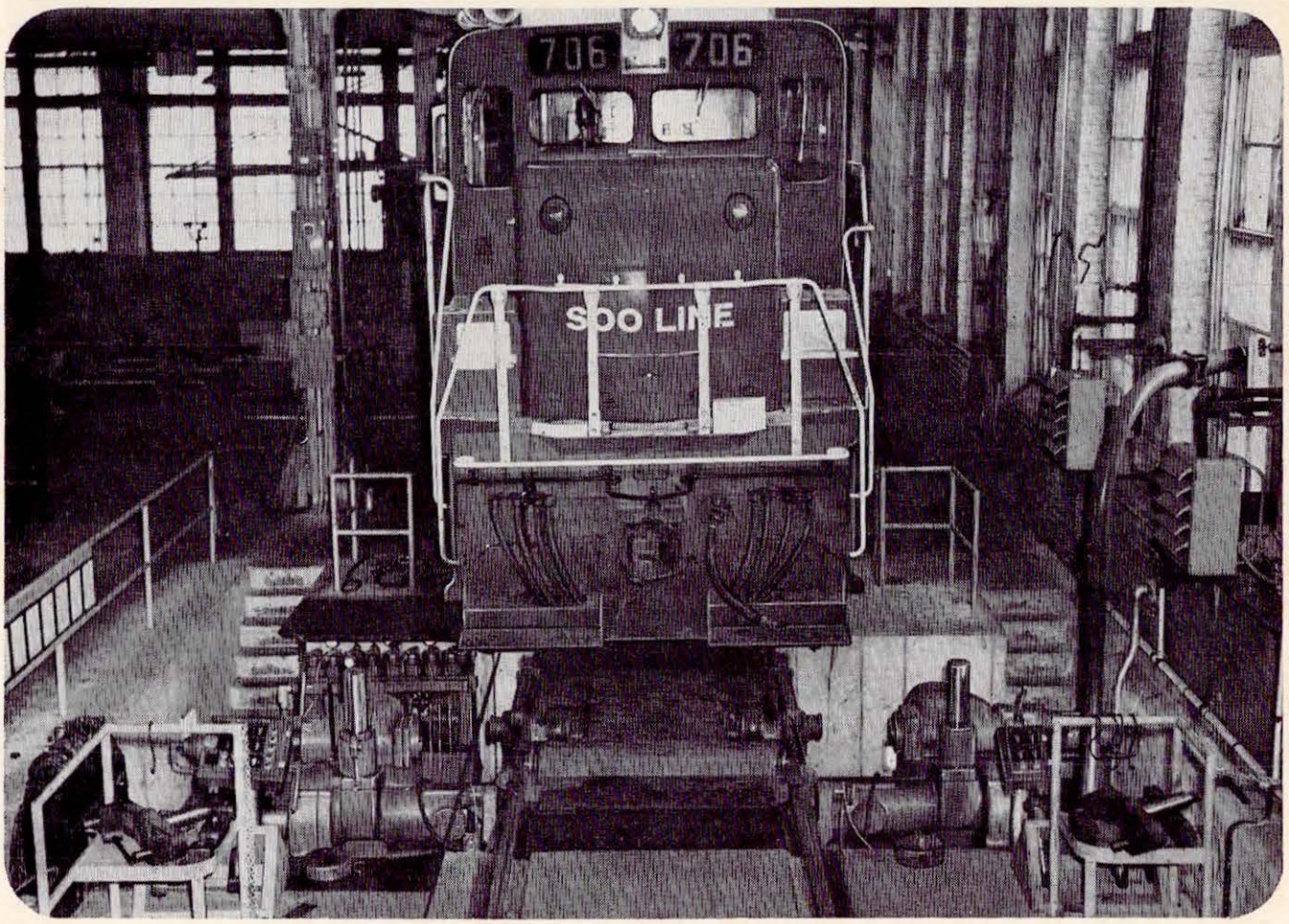


One railroad reports annual savings of 23.64% of the total cost of the Standard Wheel Truing Machine when compared to previous methods of wheel reconditioning. In addition to substantial time and labor savings in wheel contouring, the Standard machine makes possible four or even five reconditioning operations per wheel instead of the former three. This is because the Standard Wheel Truing Machine is a true milling machine: It does not have to cut as deeply as lathe tools. Only the Standard machine operates this way to provide minimum wheel maintenance, maximum savings.

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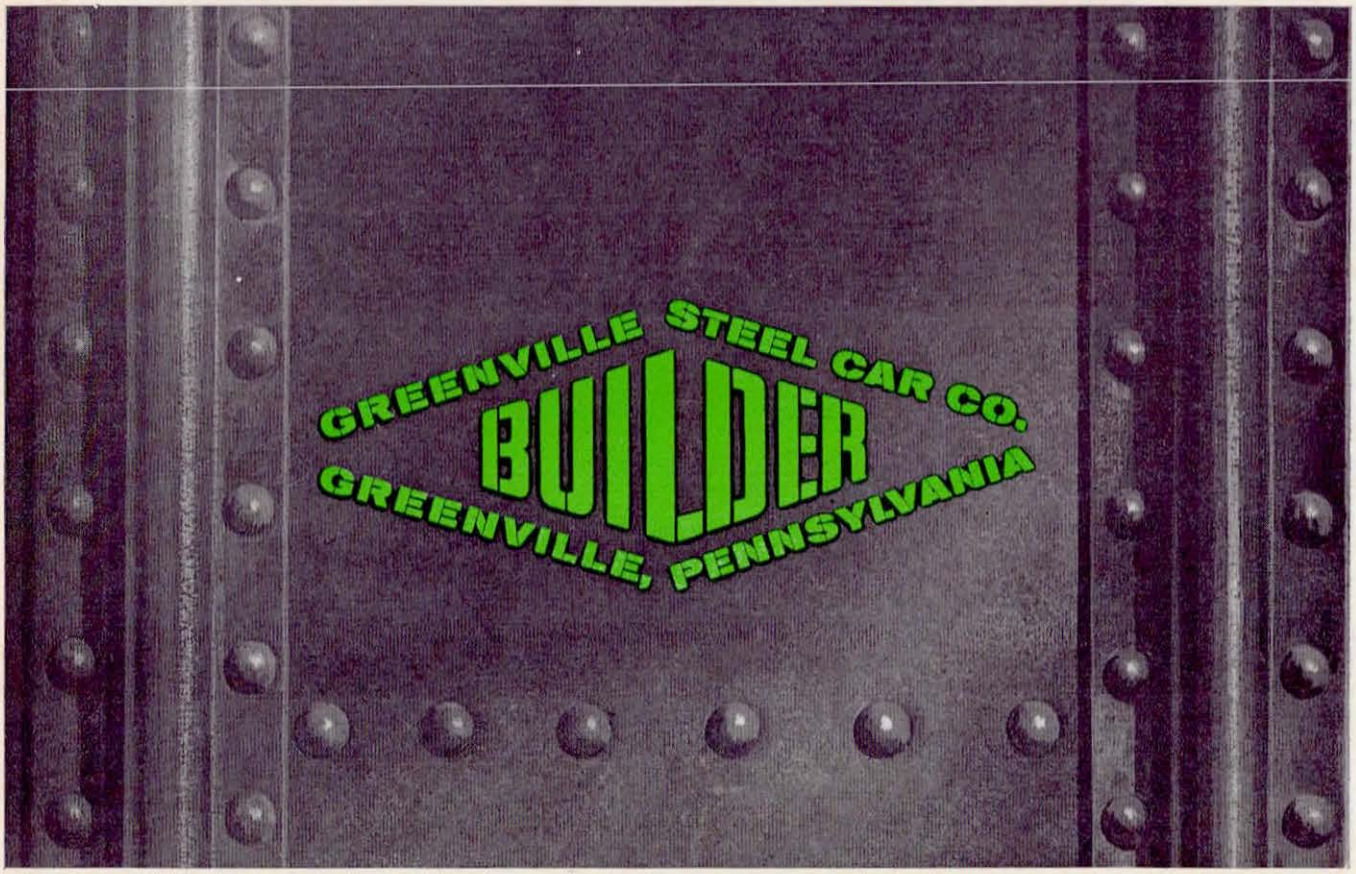


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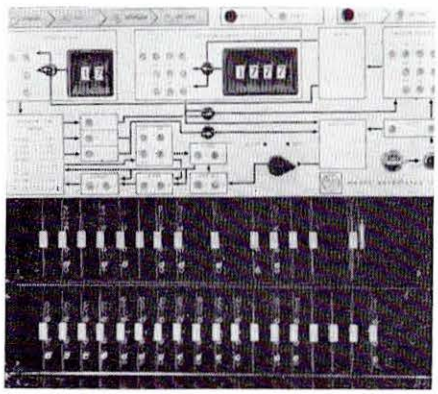
# NEW PRODUCTS REPORT



## Controller (RA-1)

The Marc programmed controller is an on-line industrial control system that fills the gap between small, digital computers and simpler logic relay systems. The programmed controller is a low-cost, solid-state digital computer with a large, contact closure oriented, input-output capability but no arithmetic capability. Whereas a digital computer is primarily a machine for processing numbers, the programmed controller is designed to control machines. It is oriented basically toward dry contact inputs and outputs. Up to 256 inputs and outputs can be equipped, without the need for additional driving circuitry.

The programmed controller follows a stored, readily changeable program, enabling it to acquire external information (represented typically by dry contacts); make decisions; and issue commands (also represented typically by dry contacts). Following its stored program the programmed controller asks whether the answer is "yes" or "no" (represented by logic "1" or "0"), it either asks further questions or issues commands. *Moore Associates, Inc.*

## Engine Protector (RA-2)

The Model 400 Level-Stat engine protection device requires no electricity and provides for modulated oil-pressure sensing through entire engine horsepower range. It protects against leading causes of premature engine failure by monitoring coolant level, flow and oil pressure, and automatically controls engine loading by retarding governor in relation to inadequate oil pressure of a cooling-system malfunction. *Armbrust Automatic Corp.*

## Shock Mounts (RA-3)

Cupmounts of "Universal" black elastomer are for use in tanks, trucks, or equipment where high vibration damping characteristics are required, or where oil immersion is encountered. For normal environments, standard elastomers are natural rubber; for extreme temperatures, Barry's Hi-Damp. The cupmount series is in four sizes, each has four different ratings that accommodate loads from 8 to 1,800 lb per cupmount. *Barry Controls.*

## Heterodyne Microwave (RA-4)

The KTR III, new IF heterodyne microwave radio equipment is capable of transmitting 1200 FDM channels or 30 megabit wideband data.

It is completely solid state except for the traveling wave tube and optional Klystron master oscillator. The equipment meets or exceeds Bell System 1200-channel long-haul objectives, EIA standards, CCIR recommendations, NTSC color requirements, and DCA standards.

Transmitter output power is 5 watts. Frequency stability is 0.0002% as a repeater and 0.002% as a terminal. The KTR III has central metering and slide out drawer construction, which makes possible testing and adjustment without traffic interruption.

Installed, the KTR III occupies a minimum of floor space. The 8-foot rack containing 2 complete radio channels with power supplies is 22 inches deep.

The KTR III is protected under a five-year warranty. This is made possible by the use of such advanced quality control methods as infrared testing. *Raytheon Co.*

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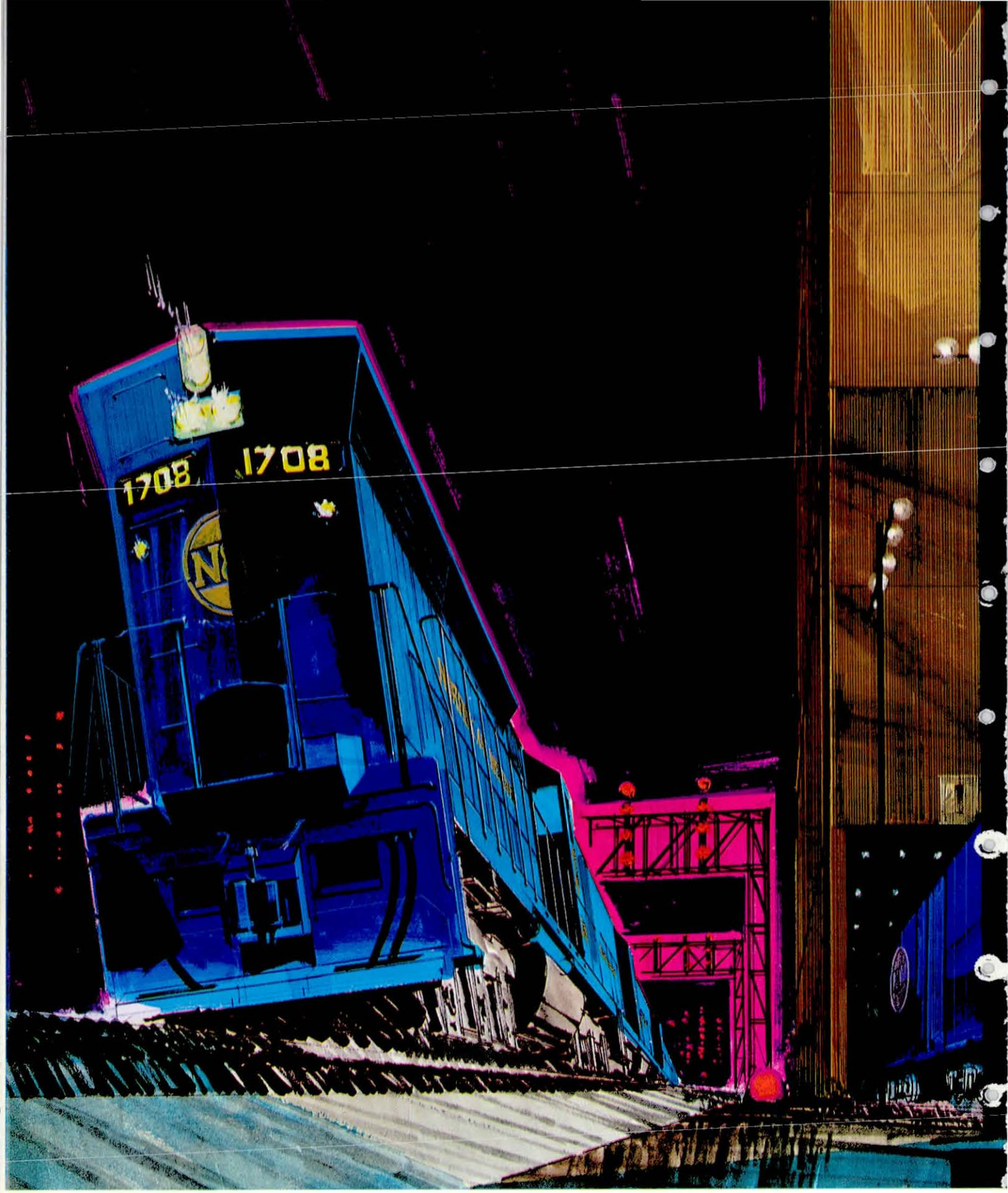


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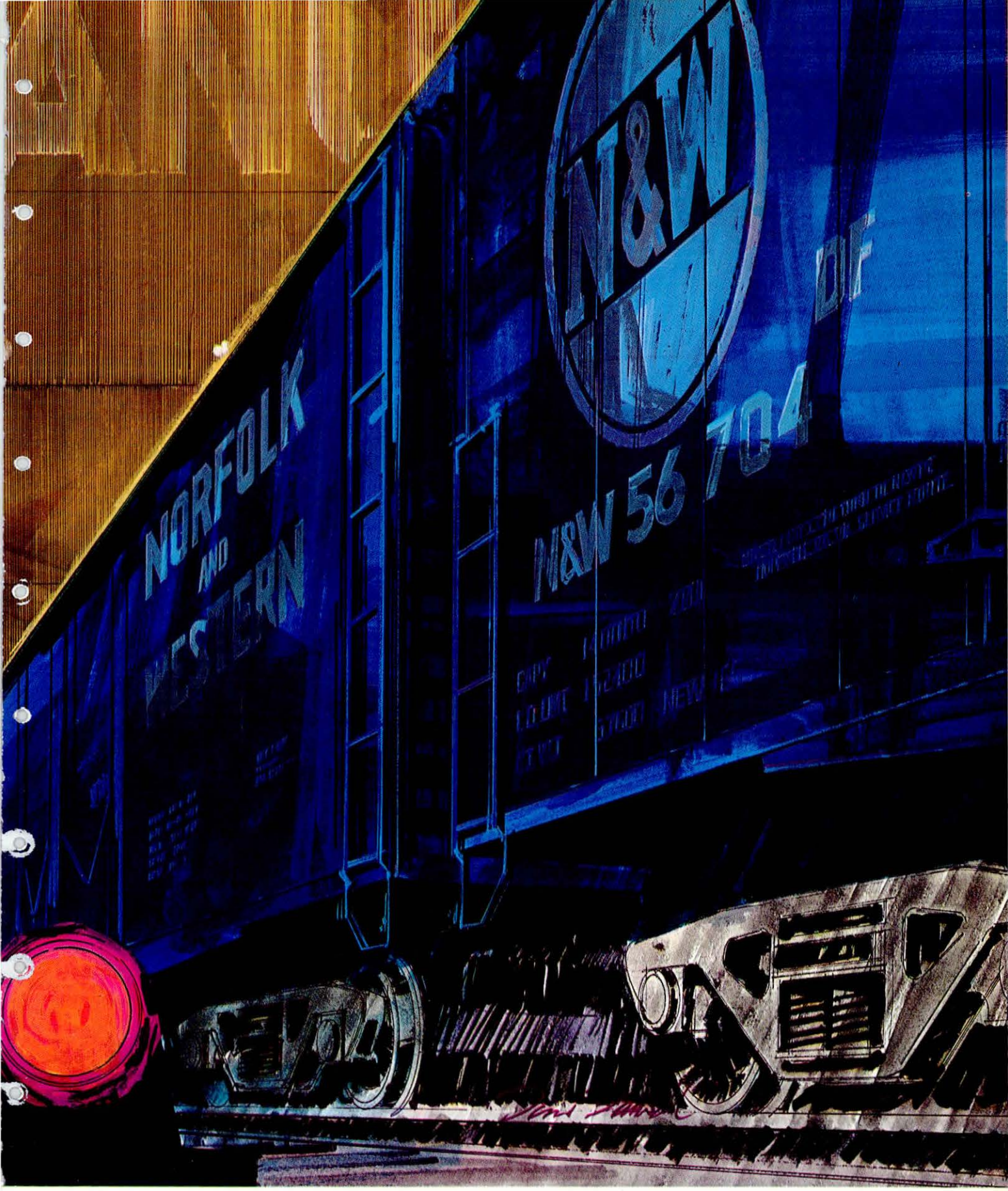


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'67 OUTLOOK

By M. H. DICK,
Engineering Editor

# M/W activity will keep its fast pace

**Some observers expect maintenance-of-way programs to exceed the high levels which were established during the past few years.**

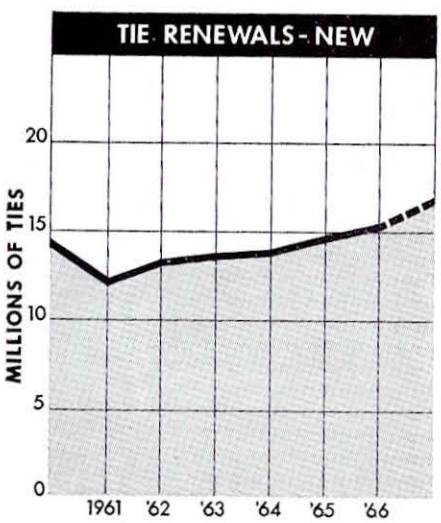
Maintenance-of-way activities have definitely established themselves on a substantially higher level than prevailed during the early Sixties when several major categories of work were hitting record lows. The uptrend that got under way in 1962 continued last year, and year-end indications were that there would be further increases in 1967, but with one of the major categories negotiating a sidewise movement.

It is important to note that behind these bare statements some cross-currents are at work whose effect is difficult to gauge at this time. For many years there has been only one important commodity that M/W departments have found in short supply —and that is money. Now they are finding that shortages can occur in other areas, too—crossties and labor, for example.

Some railroads had difficulty getting all the ties they wanted in 1966 and further difficulty is expected this year. Manpower, too, was found to be in short supply in some localities and could have been a factor in preventing some railroads from doing all the work for which money had been made available. Whether the tight manpower situation will carry over into 1967 remains to be seen. In any case, M/W men are having to face the unpleasant fact that there are other things besides a lack of money that can act as a drag on M/W operations.

● **All categories up.** Despite these adverse factors there was a quickening of activity in all the major categories of M/W work in 1966, although there were wide differences in the rates at which the increased tempo took place. This statement is based on estimates made by Railway Age on the basis of figures provided by most Class I railroads. The figures show the actual amounts of new rail and new and secondhand ties inserted for replacement purposes in 1966, and the mileages of track surfaced out of face.

M/W activities in 1966 were highlighted by sharp increases in insertions of new rail for replacement purposes and in the amount of track surfaced out of face. Estimates made by this magazine indicate that last year Class I railroads laid 600,000 net tons of new rail. This was a whopping 41% gain over the 426,682 tons actually installed in 1965, as reported by the Association of American Railroads. As estimated for 1966, rail renewals were higher than for any year since 1957.




The increase in the amount of track surfaced last year percentagewise was almost as great as the spurt in rail renewals. A total of 44 railroads reported the miles of track surfaced in 1965 and 1966, including the miles of track subjected to skin-lift surfacing. These 44 roads indicated they had surfaced 27,814 miles of track last year. This was an increase of more than 7,000 miles, or 35%, compared with the amount of track surfaced by the same roads in 1965.

● **Why more surfacing?** Railway Age has been compiling figures on track surfacing since 1960. The total track surfaced by the reporting railroads has shown an increase each year since then. There are probably several factors behind the growth in track surfacing. One is the means the railroads now have, in the form of high-speed track raising and tamping machines, for surfacing track more economically than ever before. Another is the increasing need, created by higher train speeds and new types of rolling stock, for maintaining main-line tracks to higher standards.

Tie renewals last year, while up, failed to keep pace with the increases in rail renewals and track surfacing. Railway Age estimates indicate that Class I railroads inserted 15,500,000 ties last year for replacement purposes. This was an increase of 739,708 ties, or 5%, compared with the 14,760,292 ties inserted by these roads in 1965, as reported by the AAR.

Total tie insertions last year fell considerably short of the forecast made by Railway Age in the Jan. 17, 1966 issue. That estimate, again based on figures submitted by most Class I roads giving their budgeted tie-renewal programs for the year, was that the roads would insert 17,100,000 ties in 1966.

Why did the estimated actual insertions fail by such a wide margin to come up to the forecast? If there had been any kind of setback in business last year the answer would be obvious. But this was far from the case. In fact, rather than declining, railroad business showed a healthy increase which was maintained throughout the year.

● **Was tie shortage a factor?** It is necessary therefore, to look elsewhere for the explanation. Here's where the effects of a possible tie shortage come into the picture. It would be interesting to know to what extent the inability to get sufficient ties was responsible for the failure last year of tie renewals to measure up to expectations.

Insertions of secondhand ties ap-

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# New cost-cutting M/W machines are coming up

parently went down again last year. The year 1966 thus becomes the third year in a row for which reported figures have indicated a decline in such insertions. Specifically, the 40 railroads that submitted figures on the use of secondhand ties indicated that they had put in 516,320 such ties in 1966.

During the first nine months of 1966 the total maintenance-of-way-and-structures expenditures of Class I roads came to $969.6 million, according to the AAR. This was an increase of $54 million, or 5.9%, compared with the amount spent in the like period of 1965. A reasonable assumption is that the percentage gain in M/W&S expenditures for the full year was not much different from the figure for the first three-quarters.

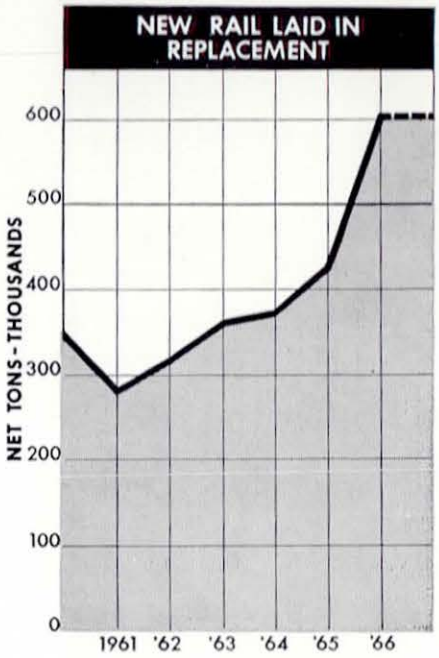
• **Work outpaced costs.** It is thus apparent that M/W officers have another year of accomplishment to their credit. They were able to perform a substantially greater amount of work with only a nominal increase in expenditures. And this was accomplished in the face of another nine-cent-an-hour increase in pay for M/W employees, which went into effect on Jan. 1, 1966. Obviously, the steps that have been taken to get more output per man-hour are continuing to pay off.

The question now is: Where do we go from here? What, in other words, will be the trend of events in the M/W field during the year now getting under way? Here are forecasts by Railway Age of activity based on the railroad's own estimates of the work they have included in their 1967 budgets:

• **New-tie renewals.** Class I railroads will insert about 16,750,000 new ties in replacement in 1967. This would be an increase of 1,250,000 ties, or 8.0%, compared with the estimated renewals for 1966.

In submitting their figures on estimated tie renewals railroads were asked whether these gave consideration to a possible tie shortage in 1967. Fifteen roads gave information on this question. Eight roads indicated that no shortage of ties was anticipated. Seven others said that, in arriving at their estimates for 1967, they did not give consideration to a possible tie shortage. Hence, the question seems to remain open whether these roads will encounter difficulty in obtaining their tie requirements, although three of them indicated that difficulties are expected. Said one chief engineer:

"We are aware of the fact that we may face a shortage of wood ties. This, however, has not influenced the decision as to the number of ties to be provided for in our budget."




Another chief engineer made this comment: "If we are unable to purchase wood ties we will be forced to buy concrete ties."

A third chief engineer indicated he had other steps in mind. "The possible crosstie shortage in 1967," he said, "has not affected the total anticipated program for that year. However, it will affect the type of ties to be purchased and where they will be purchased."

• **Secondhand ties.** The decline in the use of secondhand ties will apparently continue at an accelerated pace this year. The 40 railroads that submitted figures on this form of activity said they plan to install 371,870 secondhand ties in 1967. This will represent a decline of 144,450 ties, or 28%, compared with the secondhand ties installed by the 40 railroads in 1966.

• **New-rail renewals.** Following the sharp gain experienced in this category of work last year, indications are that it will level off in 1967. It is the estimate of Railway Age that new-rail renewals this year will be practically the same, or 600,000 net tons, as they were in 1966.

• **Track surfacing.** The year-to-year record of increases in this type of work promises to remain unbroken in 1967. The 44 railroads that submitted figures on this type of work estimate they will surface 28,500 miles of track in 1967. That will be an increase of 686 miles of track, or 2.5%, compared with the track surfaced by those roads last year.

Another Railway Progress Exposition is scheduled for October 1967. It can be expected, therefore, that manufacturers in the M/W field will be more than usually active this year in introducing new and improved equipment and other products.

Manufacturers of machinery, particularly track machines, are expected to be especially active because of the pressure to come up with equipment that will help counteract continuing increases in wages. To achieve this objective, suppliers are known to be working in two directions which are not necessarily mutually exclusive. One of these is to develop master machines capable of boosting production per hour of on-track time. The other is to design machines that will either operate off the track or are capable of removing themselves from the track at almost any location and in a minimum of time.

• **Interest in concrete tie.** The concrete tie represents another area where greater activity can be expected this year.

For one thing, now that the concrete tie has five years of successful performance behind it, track men generally appear more and more willing to give it serious consideration. Doubtless, a factor in helping to bring about this change in attitude is the realization that the concrete tie is competitive on a first-cost basis with the wood tie, and that savings in maintenance costs may be realized from it.

Evidence is plentiful that the concrete tie is growing in acceptance. A number of railroads are making regular use of it. At least one large company has adopted it as standard for new construction. The C&O/B&O has projected an extensive test installation of various types of concrete ties in heavy-traffic territory. There are no known instances in which the concrete tie heretofore has been used for spot replacement of wood ties but it is reliably reported that several roads have projected test installations of this character in the coming year.

Certain evidence that the concrete tie is headed for greater acceptance is provided by the fact that an increasing number of manufacturers are showing an interest in cultivating the market for it. A reasonable prospect is that more concrete ties will be inserted in track in 1967 than in any previous year. ■

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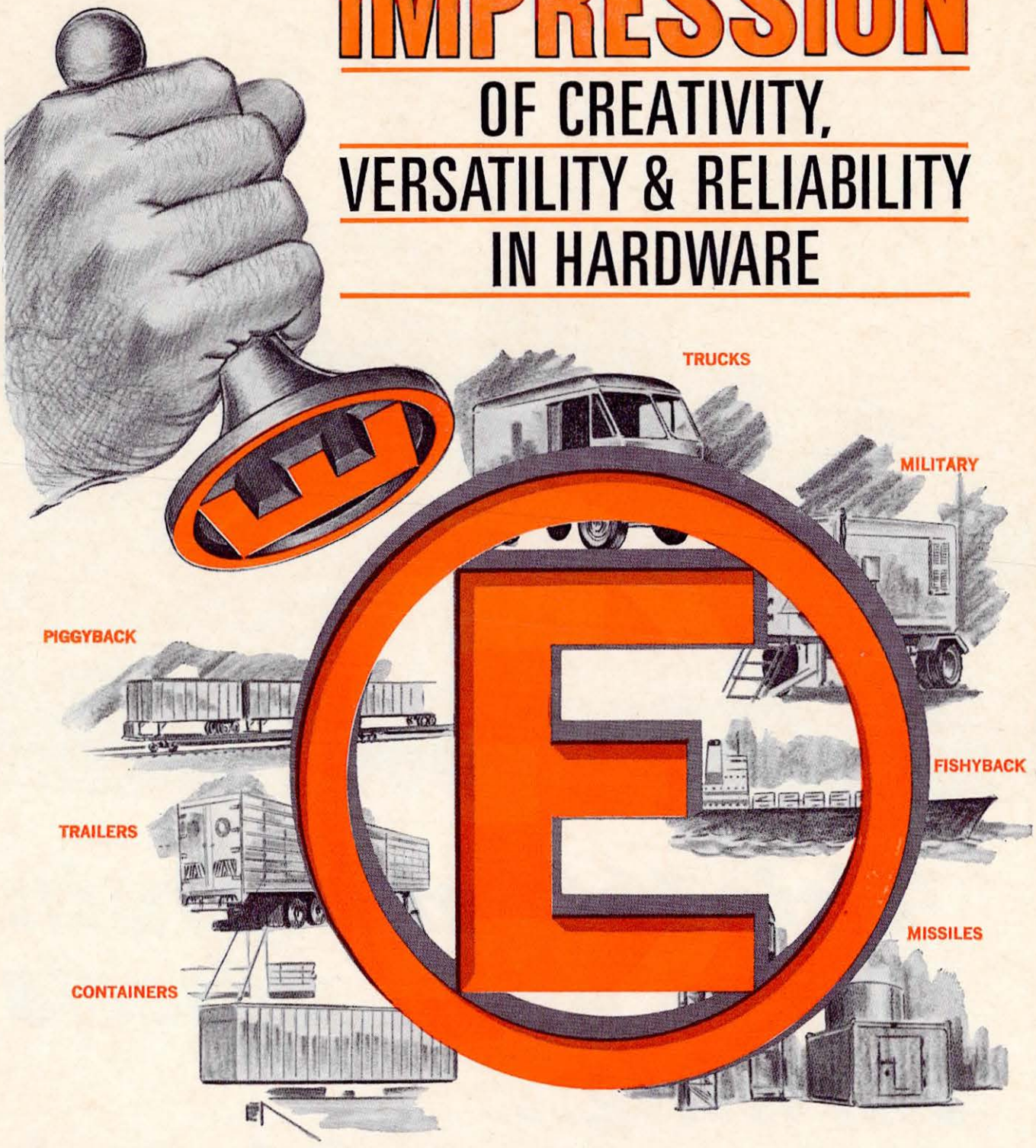


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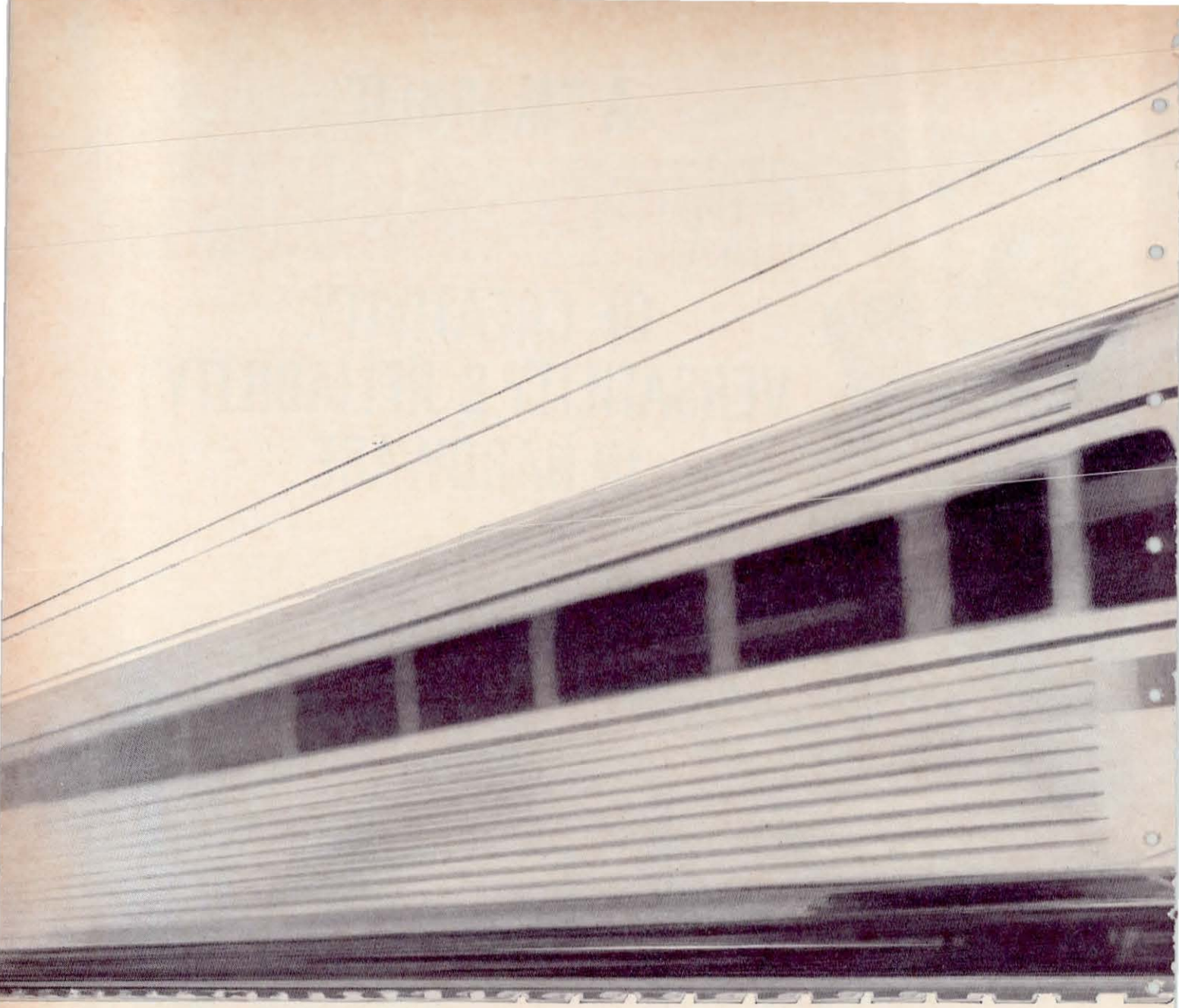

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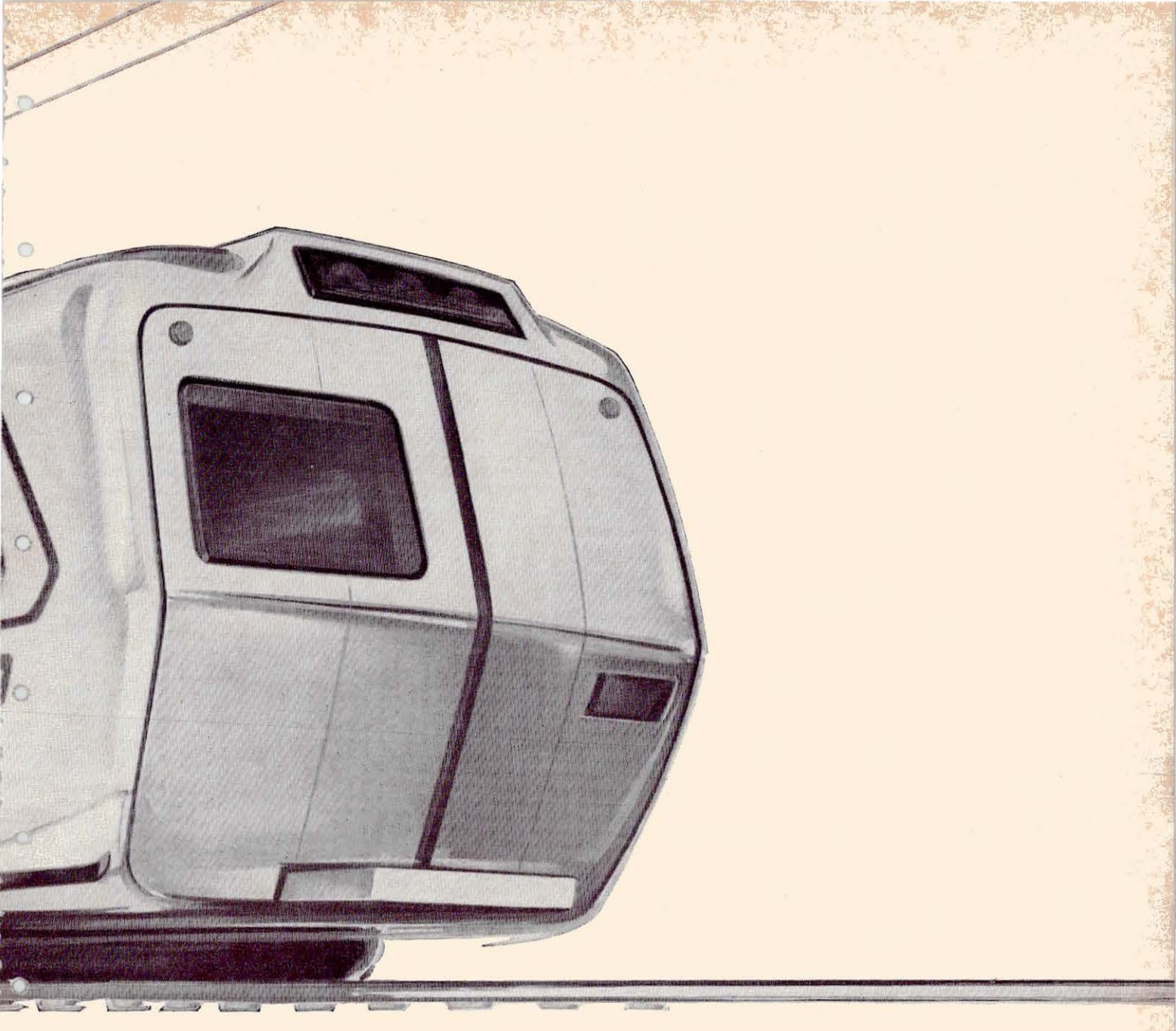

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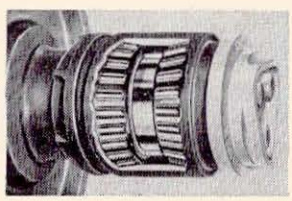

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'67 OUTLOOK

By WALTER J. TAFT, Washington Editor

# Prospects dim for legislative reform

**History shows that it takes a combination of crisis and zealotry to get meaningful transport legislation. Both are absent in '67.**

The usual tough going will be encountered again this year by the railroad industry's legislative program. Except for some reassignment of the priorities, it is pretty much the same program which got nowhere last year.

That's because its calls for non-discriminatory treatment are highly controversial, being opposed vigorously by railroad competitors who thus show how they dread the prospect of living under generally-equitable conditions. For such a program, the implementing legislation usually comes in piecemeal fashion over a long period—unless it is expedited by "crisis" conditions like the "deteriorating railroad situation" of 1958, or zealotry in Congress, like Senator George Smathers (D.-Fla.) brought to his sponsorship of the 1958 Transportation Act with its significant rate-freedom and train-off provisions. Such expediters are not likely to be present this year.

• **DOT will be getting organized.** Meanwhile, transport legislation proposals of President Johnson are apt to be delayed for sometime, if any are made this year. In this area, the Administration's first concern will be getting Alan S. Boyd, its Secretary of Transportation, in business as head of the new Cabinet-level Department of Transportation which Congress created last year. Boyd has been Undersecretary of Commerce for Transportation.

As head of DOT, Boyd says, he will be "very quiet and meek" for about a year while he gets the Department organized and establishes contacts with the transportation industry and other interested parties. The organizing job will also involve getting some 20 additional Presidential appointees confirmed by the Senate. These will include an undersecretary, assistant secretaries, and administrators of the Department's Rail, Highway and Aviation Administrations. Boyd expects these administrators to be selling the modes of transport they represent, leaving the judicial approach to him, the undersecretary, and the assistant secretaries.

• **Tough act to follow.** Incidentally, the 1966 performance of the Administration and Congress is a tough one to follow, if it was as good as it has been called by authorities big enough to quote, i.e. chairmen of the ICC, which will keep its regulatory and car-service functions, but will lose its safety functions to the new Department. The Commission's 1967 chairman, Commissioner William H. Tucker, has said "it requires little foresight to envision that the new Department will be the most important single development on the transportation scene since the original Act to Regulate Commerce and the creation of the Interstate Commerce Commission nearly 80 years ago."

## The spirit of '66

Tucker's predecessor in the rotating chairmanship, Commissioner John W. Bush, has called 1966 "unquestionably one of the outstanding years for transportation in the history of our country—probably the greatest." Bush had the DOT Act principally in mind, of course, but he also cited other 1966 legislation, including the act which gives the Commission power to include an incentive factor in per diem rates for rental of freight cars. The railroad industry was divided on that issue.

• **Fainter praise.** The industry's support of DOT was on the "in principle" basis. It tried unsuccessfully to get regulation of railroad safety practices left with the ICC, but succeeded in having the Commission left with its car-service functions.

In stating the industry's position before Congressional committees, President Daniel P. Loomis of the AAR emphasized that passage of the DOT Act would not advance any major item on the railroads' own legislative program. He did say that the Presidential proposal contemplated a "forward and most progressive step," but he warned that it would not solve the country's over-all transportation problem. The AAR president added: "No one should overestimate what would be accomplished. There would remain certain inequities and inequalities that can be eliminated only through changes in existing provisions of substantative law."

Subsequently, Loomis said he was hopeful that DOT will constitute a voice at Cabinet level that will make other departments of the federal government mindful of the need for dealing fairly with carriers of all modes. This need was pointed up recently when the Department of Defense refused to heed a joint plea by regulated carriers that it refrain from using unregulated trucks of agricultural cooperatives.

• **Rate drive in abeyance.** The reassignment of priorities in the railroad program pushes the call for freedom to make competitive rates to the back burner and assigns a top 1967 priority to proposed legislation which would make recommendations of Presidential emergency boards in wage and rules cases final and binding. Other proposals with top 1967 priorities are the calls for adequate user charges on publicly-provided transport facilities, and various tax-relief proposals.

Removal of the rate-freedom item from the priority list indicates no loss of interest in this matter. It was sidetracked to await the outcome of the Ingot Molds case, which is now in the U.S. District Court at Louisville, Ky. The case involves the appeal of the Pennsylvania and Louisville & Nashville from the ICC's 1965 decision in I&S No. 8038.

That decision condemns reduced railroad rates published to bid for shipments of ingot molds moving over truck-water routes from Pittsburgh, Pa., to Steelton, Ky. The condemnation relies on a finding that the truck-water service is the low-cost mode on the fully distributed-cost basis. That basis is used generally by the Commission, but it is assailed by the railroads as not in accord with the 1958 Transportation Act's rate-freedom provision, which is

*(Continued on page 68)*

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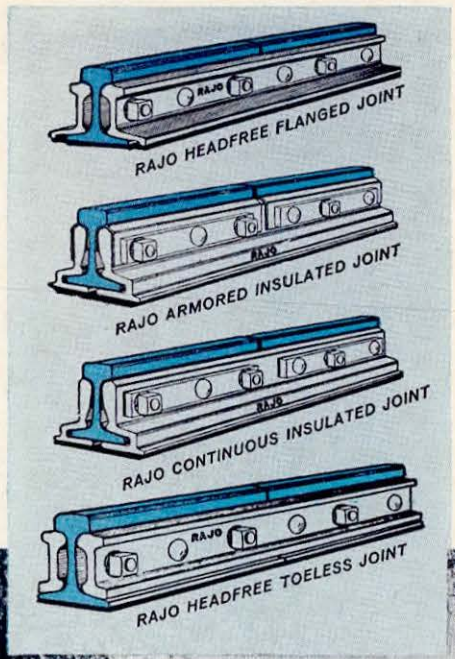
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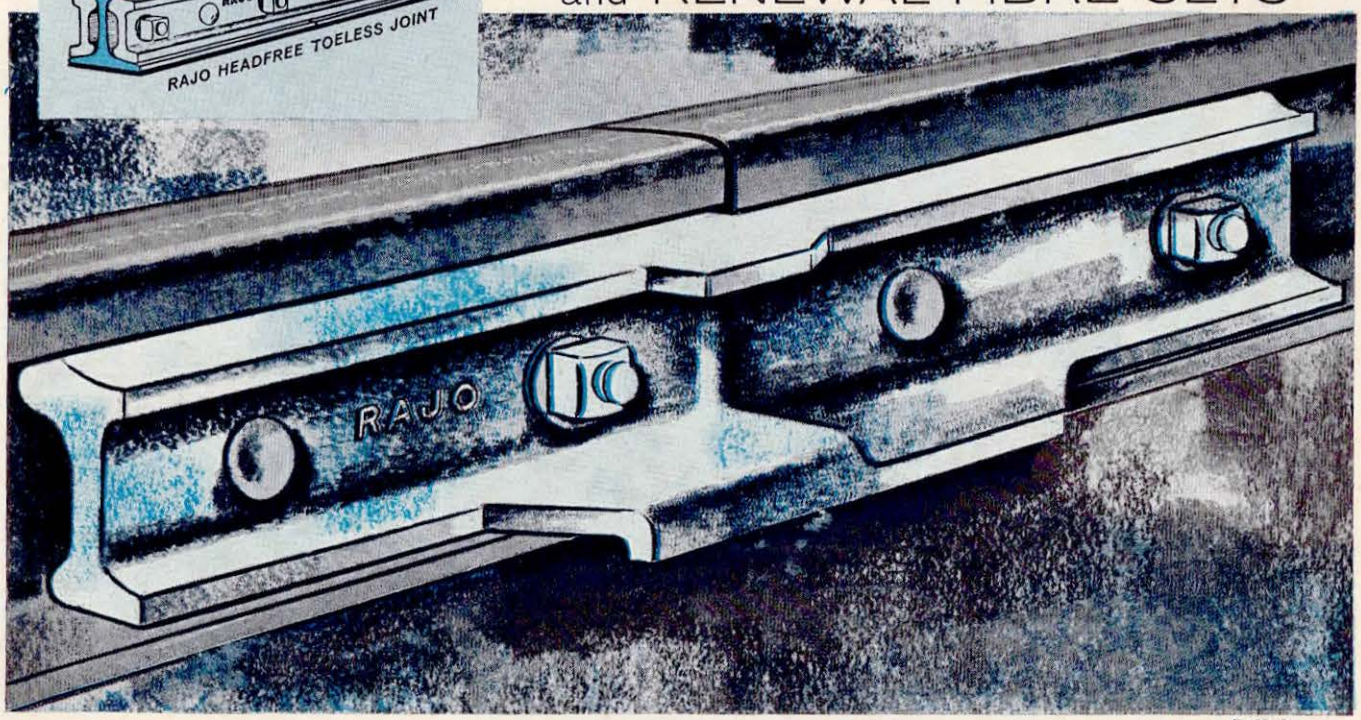


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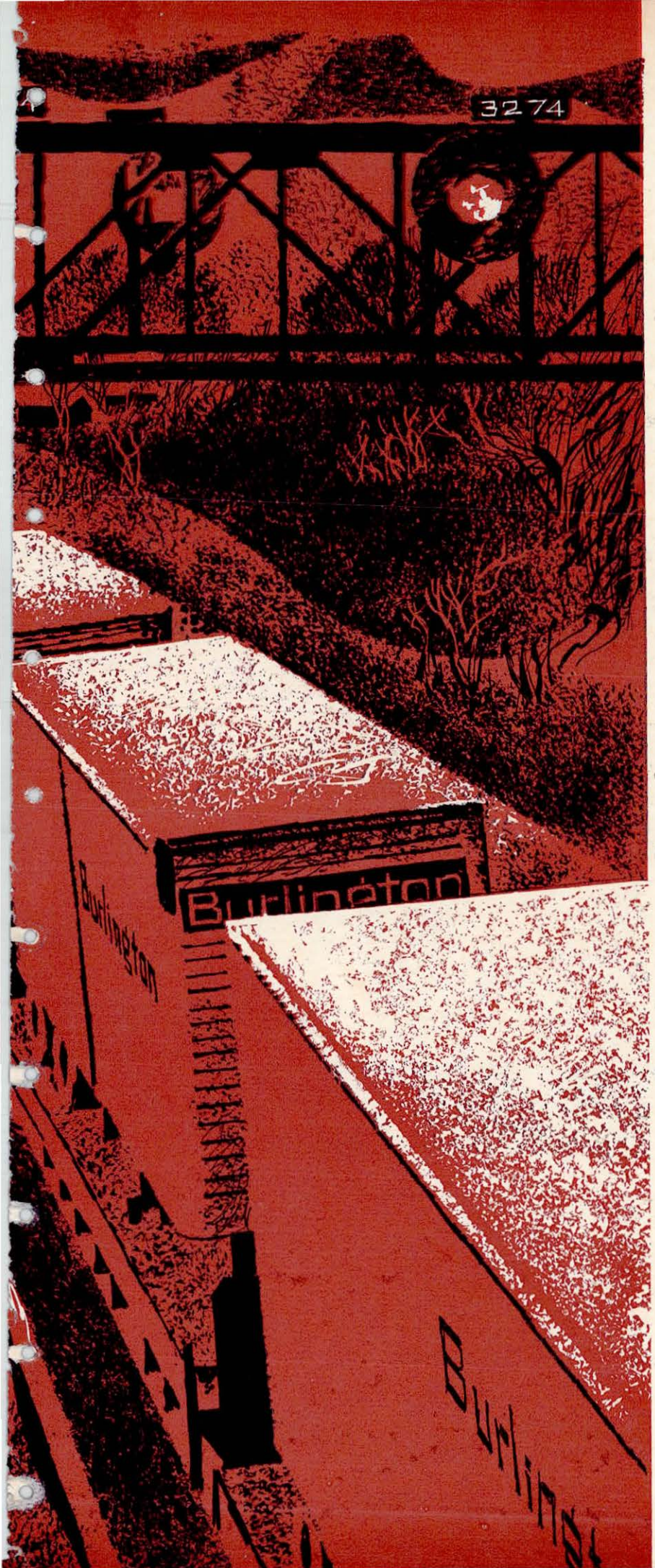


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2. Burlington is building and repairing a great number of cars at their own shops. The road is also purchasing large numbers of specialized cars from outside builders. Typical of Burlington's technological progress are the giant polyurethane-foam-insulated box and refrigerator cars the line builds at their own Lincoln, Nebraska, shops.

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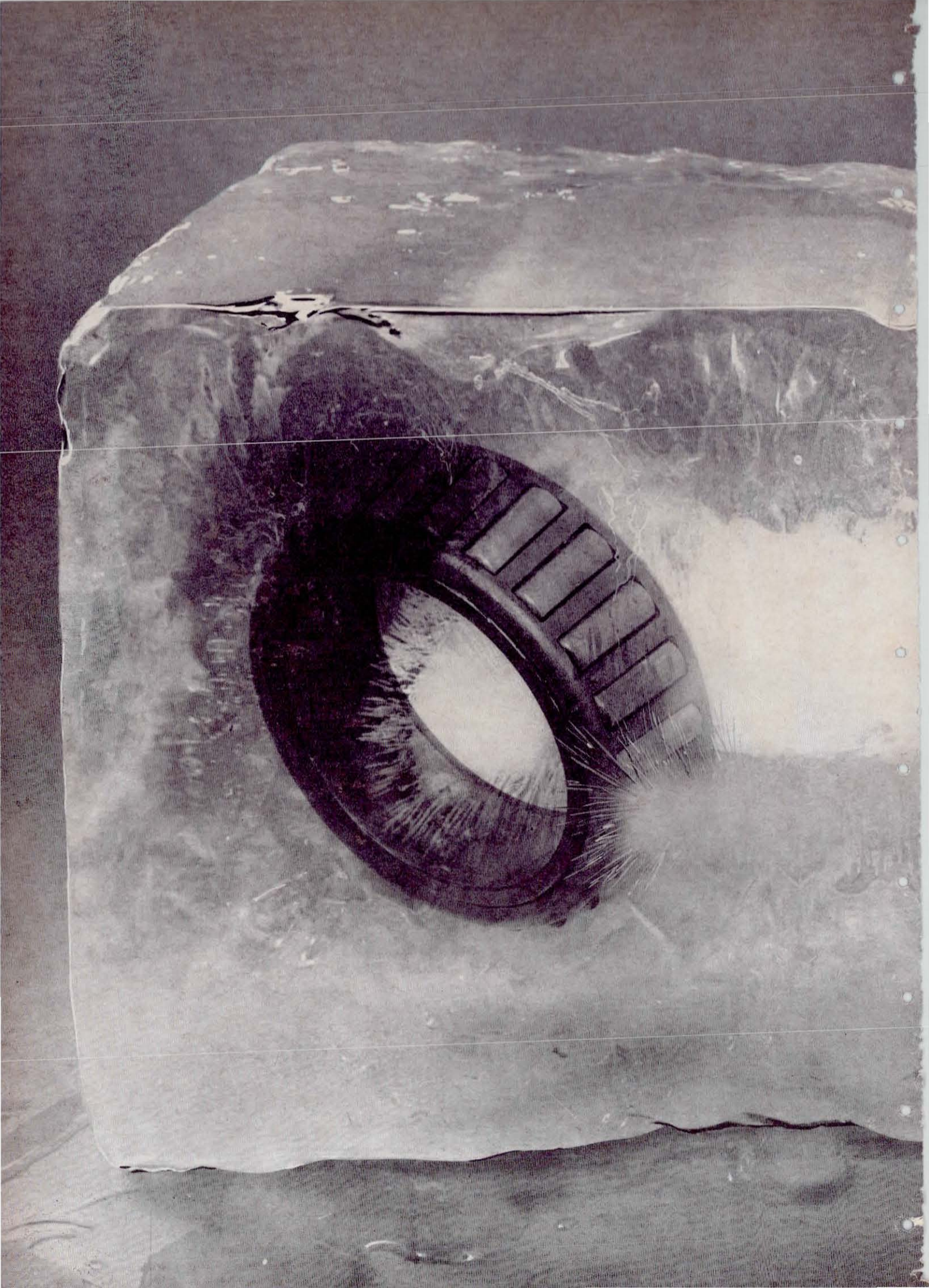

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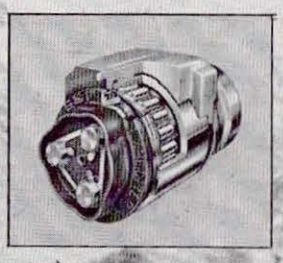

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# Labor legislation gets top priority in '67

*(Continued from page 62)*
now Section 15a(3) of the Interstate Commerce Act.

● **Justice, CEA support railroads.** The railroads' position is that fully-distributed costs should have no role in competitive-rate cases, the only proper test being whether proposed rates exceed out-of-pocket costs and are compensatory in the sense that they improve net earnings. In a dissenting opinion at the ICC, Commissioner Howard G. Freas condemned the Commission's decision as one which invited "reversal in court."

The Department of Justice agrees with Freas. It has filed with the Louisville court a brief supporting the railroads' position, and asking that the Commission's order be "set" aside and permanently enjoined." This puts Justice in line with the position of President Johnson's Council of Economic Advisers, as set out in the Council's annual report of a year ago. Presumably, also, the new DOT might be expected to take a like position. Secretary-designate Boyd has indicated that the Department might become an intervener in such cases. In any event, the railroads have decided to adopt a wait-and-see attitude with respect to the matter.

● **Finality for wage reports.** The assignment of a top 1967 priority to getting legislation for finality of emergency-board reports reflects the railroads' desire to have this machinery established before a crisis comes, as it did in the featherbedding case. That crisis was not resolved until Congress, under the gun of strike threats, enacted legislation sending the controversy to arbitration.

The railroads are optimistic that their proposal may get somewhere in view of President Johnson's similar position. The President said in his State-of-the-Union-Message last year that he would recommend legislation giving him power to deal with threatened strikes which would critically hurt the public. He made no specific proposals to the last Congress, but the railroads hope the follow-through will come this year, and that the Presidential recommendations will cover threatened railroad strikes. Some carriers operating other modes of transportation are in agreement with the railroads on this issue, particularly the deep-sea water carriers generally and some individual air lines. Labor relations of the air lines, like those of the railroads, are covered by the Railway Labor Act.

● **User charges.** The railroads are also optimistic that their recommendations for more adequate user charges on publicly-provided transport facilities will get somewhere this year. Here they have the support of President Johnson. He submitted user-charge proposals to Congress in his Budget Message of a year ago.

Later on, the Administration watered down those proposals to eliminate the call for institution of waterway charges and to confine new or modified levies to aviation. This was a compromise generally acceptable to the interested parties, and it was expected to get through Congress before adjournment came. That expectation might well have been realized if the House Committee on Ways and Means had not got preoccupied with hearings on the act which suspended the 7% investment credit until Dec. 31, 1967.

● **Investment credit.** Convincing Congress that this suspension period should be permitted to end Dec. 31 will be a major project of the railroads' Washington representatives. The failure to get car buying exempt from the suspension was a real disappointment. It looked for a while as though the railroads were going to win that one. They sold the idea to the Senate only to have it rejected by the Senate-House conference committee which shaped up the final version of the suspension act.

## Income-tax arrangement

This credit is an income-tax arrangement which provides generally for cutting tax liability by 7% of the cost of new equipment or other facilities. Railroads used it in 1965 to get tax credits totaling $51 million. The suspension act does give the railroads (and other industries, too, of course) what they wanted in liberalized limits on totals of allowable credits and on carry-forward periods. These sweeteners can't be tasted, however, until the suspension is lifted, and Congress often postpones such liftings for many years. An example is the annual setback, for many years, of the date for ending the passenger-fare tax imposed in World War II.

● **Depreciation guidelines.** Another tax proposal of the railroads will call for embodiment in the Internal Revenue Code of the Treasury's depreciation and amortization guidelines. The idea is that this would tend to insure continuance of the guidelines, which might now be revoked or modified in major respects by the Administration or a succeeding Administration. Prospects for this are considered good because it will probably have the support of industry generally and appeal to several members of Congress.

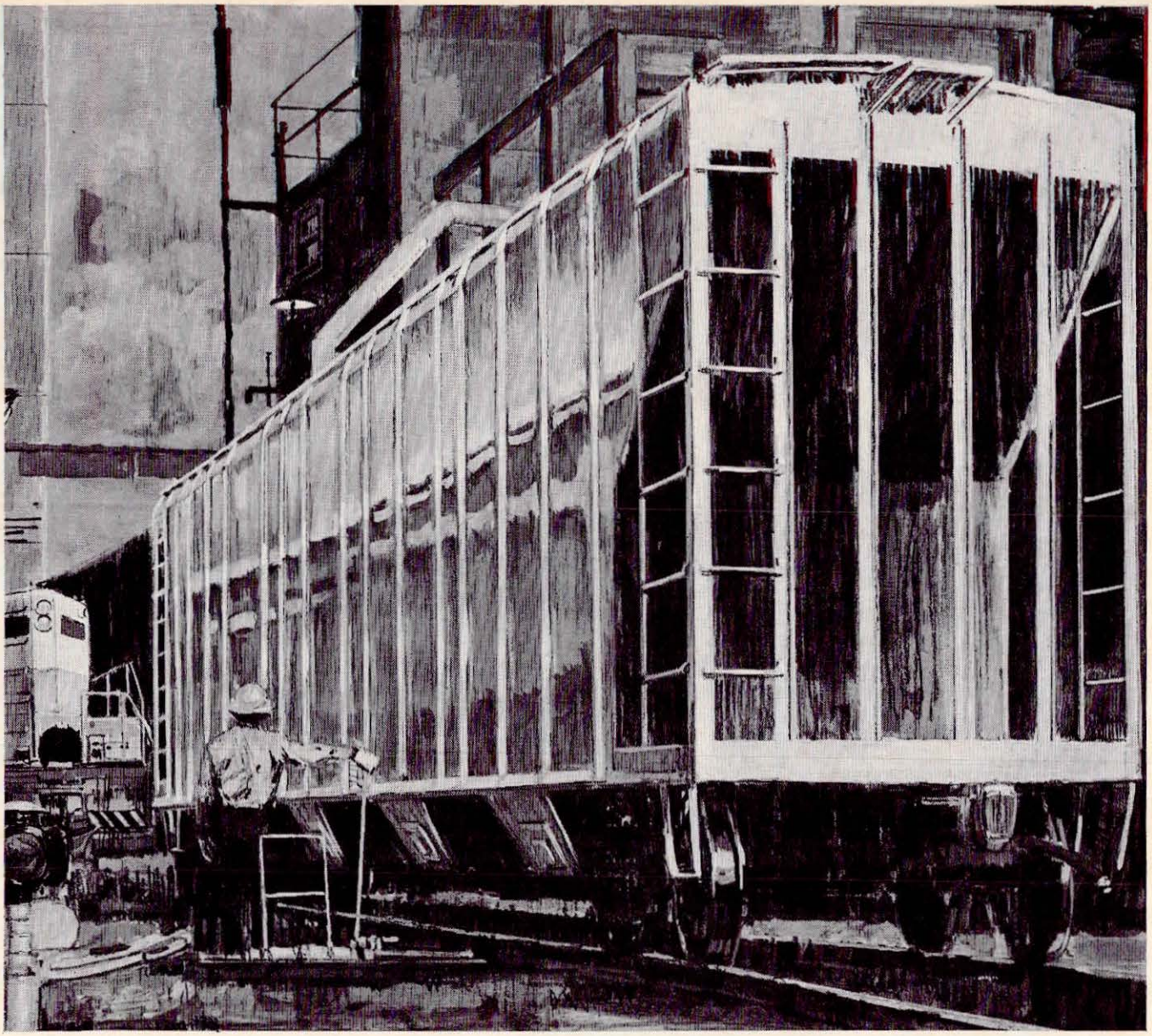
The railroads also want modification of the guidelines' reserve ratio, which determines the validity of depreciation rates being used. It is felt that the present test is not fair and proper as applied to the railroads, and it could cause some roads to lose benefits of the guidelines when the present period of grace expires.

As to the request for modification of the guidelines to permit amortization of such property as grading and tunnel bores, the AAR is still working with the Treasury. Meanwhile, the bid for legislation to accomplish this purpose has been held in abeyance. The work with the Treasury includes a joint study for which an independent accounting firm has been employed. The stake here is substantial. The investment in grading and tunnel bores amounts to about $3½ billion.

● **Local tax battle not won.** The call for relief from discriminatory state and local taxes is still on the tax-legislation program. Although a U. S. Supreme Court decision in an Illinois case advanced this program last year, railroad attorneys think the industry still needs relief which only federal legislation would provide. The proposed legislation would give federal courts jurisdiction to condemn discriminatory state and local taxes as undue burdens on interstate commerce.

Washington representatives of the railroads were encouraged last year when it developed that there were probably enough favorable votes in the House Committee on Interstate and Foreign Commerce to send the proposed legislation to the House floor. The railroad representatives know of no reason why the committee's chairman, Represenative Harley O. Staggers (D.-W.Va.), would delay calling an executive session to permit a committee vote. So they hope committee clearance will come early this year on the record already made, or after only brief further hearings. They also hope for early hearings before the Senate's Surface Transportation Subcommittee, which is headed by Senator Frank J. Lausche (D.-Ohio). They point out that implementation of this proposal would help all railroads—rich and poor. That's broader than some of the other tax relief, where benefits go only to roads paying income taxes.

*(Continued on page 99)*



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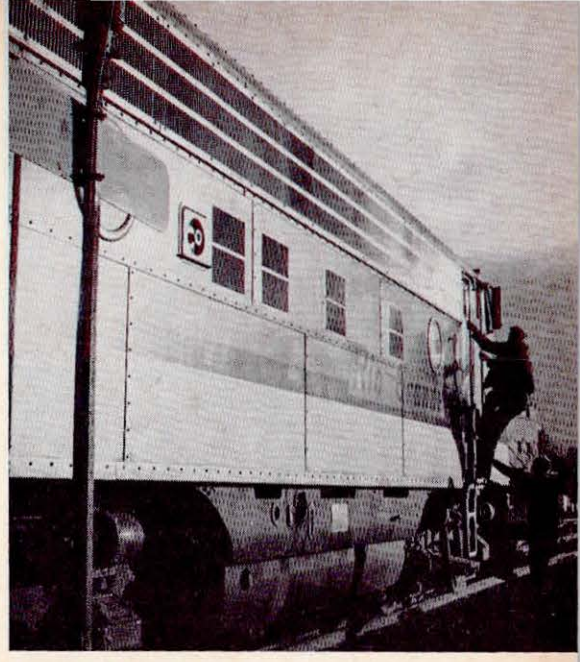
'67 OUTLOOK

By GUS WELTY, Senior Editor

# Labor-cost problems: They grow larger



**On the head end**

The Firemen settled their wage case quickly—but not the Engineers.

As the saying goes, "the laborer is worthy of his hire"—and both the payers and the payees had better hope so in 1967.

Labor costs are going up—on almost all fronts. Wage rates are increasing. Fringe benefits will cost more. Railroads will be financing a supplemental-pension program. They'll also be paying more into the Railroad Retirement fund to cover improvements in basic benefits.

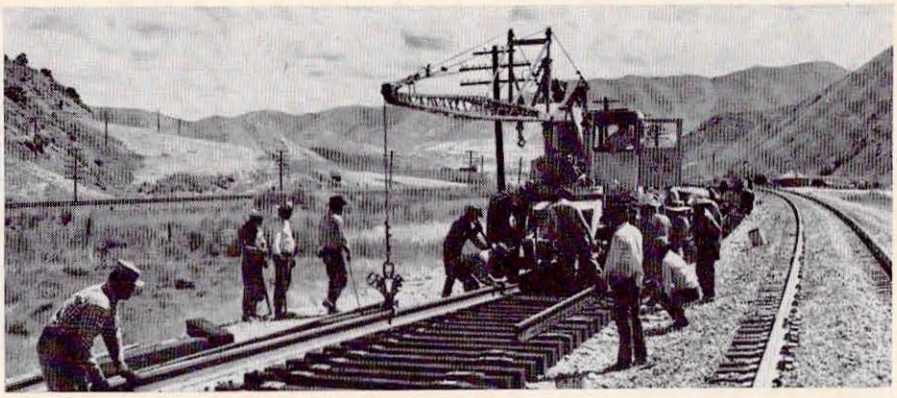
At the same time, railroad employment is becoming more stable. Average employment last year was 630,000, compared with 640,000 in 1965—and the 10,000 reduction was the smallest loss recorded in many, many years.

- **Theory and practice.** The solution to the looming problem is, of course, obvious. If costs associated with labor are all going up, you just get the job done with fewer people. Or perhaps you jack up productivity to a point where the returns offset the added costs.

Those are fine theoretical solutions. They've been applied in a practical way in recent years in an effort to hold over-all labor costs in some kind of decent balance. But there is some doubt as to whether they can be worked to such good advantage today and tomorrow.

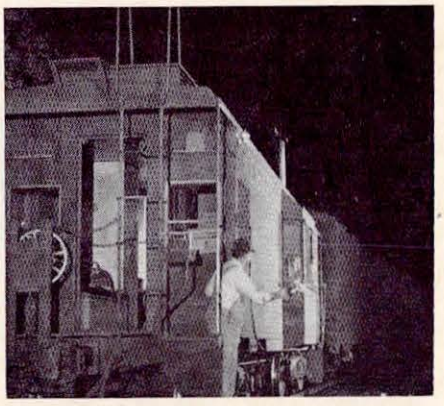
According to the record, there was a year less than a decade ago when railroad employment dropped by more than 145,000. Even more recently, there was a year when employment shrank by more than 60,000. Over the past five years, however, the average cut has been about 17,400—with three of the years falling below the average and industry employment reaching its most stable point last year.

- **Fewer people, more money.** In the



**Out along the line**

Most of the non-operating unions are still unsigned, although the biggest of the group, the Clerks, accepted the carriers' 5% offer.

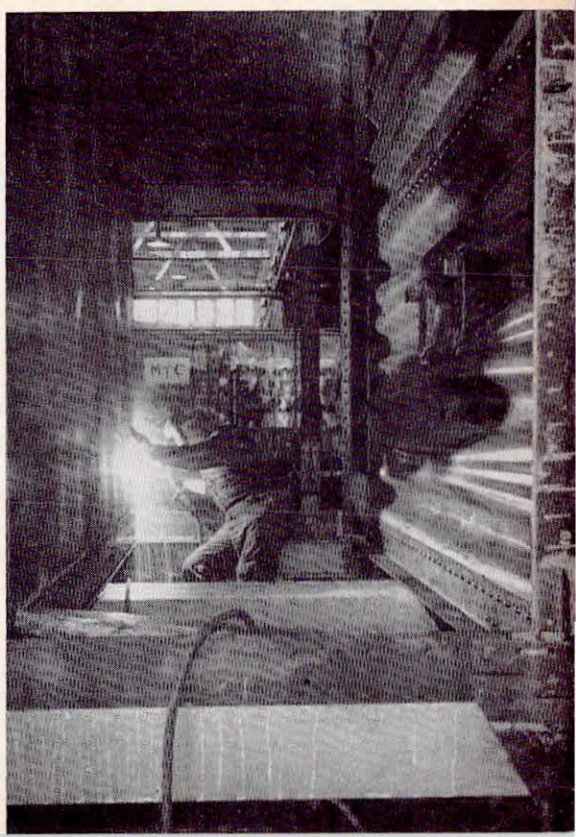


**In the caboose**

The Trainmen set the pattern—but the Conductors and Switchmen are balking at taking it.

**In the shops, costs go up**

Shop craft unions also want more than the pattern—and they want emergency-board handling.



# The Big Question—What to expect from Congress

meantime, railroad payrolls—which had been easing downward in the late 1950s—have been going up rather steadily. It's a fact that 1966 employment was 12.3% under 1961 levels. It's also a fact that during the same period, wage-and-salary payments rose 5.3%, total labor costs went up 7.8% and total labor costs per employee jumped by almost 23%. Of such things is an earnings squeeze made.

How about the projections on '67? To begin with, rail unions representing about half of the work force have accepted a package calling for a 5% wage increase and improved fringe benefits. That's the pattern. But some are balking at me-too settlements—and it's quite conceivable that there will be emergency boards created before the current wage-benefit movements are disposed of.

Estimates vary on the likely cost of the package, applied across the board. Depending on the base figures used, it's possible to calculate the cost as anywhere from $250 million per year on up. And to this, then, should be added the cost to the industry of pension legislation enacted (with industry-union backing) by the 89th Congress. A special tax to finance supplemental pensions may yield about $34 million annually, all from the carriers; and both employers and employees will be paying more (one-fourth of 1%) in basic Railroad Retirement taxes to help finance benefits which had been granted previously to Social Security annuitants.

• **A cut—or a boost?** There are, perhaps, a couple of ways to ease the financial bind which another sharp increase in labor costs may create. One would be to cut deeply again into employment totals. Another would be to boost the absolute productivity of the industry and bring in enough new business to cover the added costs. And here's where the theorizing gets sticky.

Some observers are confident that railroads can still slice away at job totals. They point to state crew-consist-law repeals, particularly in the West. They point to manpower savings still perhaps possible in the ranks of operating employees in other contexts. They suggest that mergers of the past several years will begin to pay off in reduced labor costs as job-protection provisions run out.

On the other side are other observers who aren't quite so confident. They point to job-stabilization agreements entered into by the carriers and various unions in recent years. They cite the record on employment and the leveling-off experienced in '66. They read the actions and statements of union leaders as indicating that job cuts may be fought as never before—and with every weapon at the union's command.

Even those who think more jobs can be cut, however, aren't looking for a return to the years when 30,000 or 40,000—or 145,000—jobs disappeared. They see, instead, reductions along the lines of the 1961-66 pattern.

• **Any chance of staying even?** Under these circumstances, there's no way to keep costs from rising. Moreover, there's no guarantee that they won't go up again on or before Jan. 1, 1968. Agreements already negotiated in the 1966 wage-benefit movements permit re-opening in September—and new demands have to be viewed as inevitable.

Next comes the question of productivity. If increased costs must be accepted, can the industry generate enough new revenue to at least stay even?

Here again, you get arguments. Since 1961, total operating revenues have gone up 16.2% while total labor costs were rising 7.8%. In dollars, revenues have gone up by $1.4 billion while labor expenses were climbing by $400 million.

## The biggest single worry

This new year, however, may be something else again. And at this point, not many people see revenue prospects to offset labor-cost certainties. A recent survey of top railroad officers pinpoints this problem as the biggest single worry of '67—and there's a definite fear that industry momentum may be lost if labor-cost increases begin to swallow revenue increases and then demand more.

• **Unions worry, too.** Management, perhaps fortunately, isn't alone in its worrying about the new year. Organized labor has its own problems—which, in the end, could turn out to be even more serious.

It is not outside the well-known realm-of-possibility that '67 will see a new venture into compulsory arbitration—in one form or another, for one reason or another. Among unions, those in transportation are in the most critical position—and so they run scared, at least for a while. There's a good chance that major rail unions will be extremely cooperative, agreeable and careful while the motives, intentions and inclinations of the 90th Congress are in doubt.

This forecast, it should be made clear, applies to grand-lodge people—not to mavericks out in the field, whose next moves sometimes can't be predicted even by the grand lodge.

Still, it is a forecast that bears a certain strength. Last year, as it happened and as things happened, wasn't a good one for the image of those unions operating in the broad field of "public service." Nurses and cops and firemen and school teachers got headlines for striking or calling in sick or threatening some form of rather drastic action. Subway workers and airline mechanics and truck drivers and, in scattered cases, railroad employees did things that didn't endear them to the general public.

• **Unions get the eye.** This is one important point about union people who are in the public eye: They're there all the time. People might wait to buy a new car because the auto workers are on strike, people may go back to bottled beer because the makers of aluminum cans have been struck. But let the nurses or the teachers or the guys who man the 8:04-out-of-Glenview walk off the job, and all hell breaks loose. It just works that way, transportation unions know it, and they fear it.

An officer of one of the larger brotherhoods not long ago pondered a question on the major problems facing rail labor in '67. And he came up with two big ones: Merger, which has long been a worry; and the actions of organized labor itself, which haven't seemed to be much of a concern, at least to some in labor.

The big fear is that labor—especially that part of labor which functions in the public-service area—could well feel the wrath of a new Congress which owes relatively little allegiance to unions. Without a doubt, this fear was a contributing factor when the biggest of the operating organizations, the Brotherhood of Railroad Trainmen, agreed to a 5% wage boost after serving notices demanding 25%. Without a doubt, this fear lies behind the hopes of rail unions that upcoming negotiations between the Teamsters and the nation's motor carriers can be settled amicably. And, without a doubt, this fear explains the deep and reverent hope of some union people that others will settle without driving their wage-benefit disputes to a messy and possibly damaging conclusion.

• **The view in Washington.** In all of this, it has to be remembered that Congress, once, did pass a compulsory-

*(Continued on page 125)*

# FIRST RESOLUTION FOR 1967

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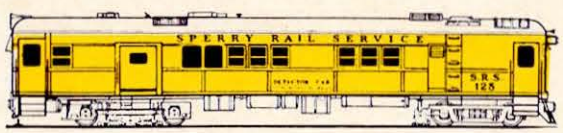


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'67 OUTLOOK

By JOHN D. MITROS, Western Editor

# "Have-nots" cloud the merger picture

**Failure of merger-minded carriers to take adequate notice of the effects on neighboring roads has helped to delay consolidations.**

The railroad industry goes into '67 with unusually bitter and divisive elements added to the complex problems that always have to be resolved when large companies decide to merge.

Observers in the financial community say railroads are their own worst enemies when it comes to merger planning. In the past, roads planning mergers in all regions have been guilty of ignoring neighbors who could be hurt by loss of traffic and altered divisions from bridge traffic. This is the pressure that has forced the opposition to take its case to the courts, thereby delaying merger consummations tremendously.

● **What to avoid.** If the industry is to avoid in '67 what it experienced in '66, it would seem rail managements will have to deal with neighboring roads for enough of a consensus to keep court involvement at a minimum and to keep Commission consideration clear-cut and simple as it relates merger proposals to national transportation policy and the public interest.

Mark '66 down in industry history as "the year of the second look" so far as railroad mergers are concerned.

Last year didn't start that way. When the Commission gave its blessing to the merger of Pennsylvania and New York Central in April, there were those who figured '66 as the record year for industry marriages.

Missouri Pacific's control of Chicago & Eastern Illinois, approved by the ICC in 1965, was in the courts. Great Northern, Northern Pacific, Chicago, Burlington & Quincy, Spokane, Portland & Seattle were waiting for word on the favorable examiner's report they got in 1964 on their application for merger. Atlantic Coast Line and Seaboard Air Line (approved in 1963) hoped to get their case out of the courts. Chesapeake & Ohio and Baltimore & Ohio waited for the ICC to act upon the favorable examiner's report they got (in 1965) for their application to control Western Maryland. Chicago Great Western and Chicago & North Western waited for a green light from the Commission after an examiner's report approved their proposal, and C&O also had a favorable examiner's report on its application to control Chicago South Shore & South Bend.

● **The list expands.** The line of hopeful couples at the Commission got longer in '66. Early last spring Missouri Pacific applied to the Commission for permission to buy the Alton & Southern—contesting the application filed at the end of '65 by the Cotton Belt for control of A&S. Two months later MoPac decided to try for control of Santa Fe (as a way of forcing the Commission to give over-all consideration to the merger picture in the West, MoPac officers say) and filed an application for such control by MoPac and the Mississippi River Corp. C&NW and Milwaukee filed for merger at mid-year.

## The Rock Island hassle

Through the spring and summer the eyes of the railroad world were turned to the small group of railroads involved in the fight for control of the Chicago, Rock Island & Pacific. What formerly had been a fight between Union Pacific and C&NW now consisted of four cases consolidated into the protracted hearings (Union Pacific's case, C&NW's case, Southern Pacific's application to buy some Rock Island lines and Santa Fe's application to buy some line and acquire some trackage rights over additional Rock Island lines—with SP aligning on UP's side and Santa Fe lined up with C&NW).

Pending at the start of '66 was an application by Norfolk & Western and C&O to the Commission for a hearing on their plan to merge. Hearings were also in progress over the petition of Boston & Maine, Delaware & Hudson and Erie Lackawanna for inclusion in the previously approved N&W system.

With the stage that crowded, the industry looked for some spectacular action in the merger movement.

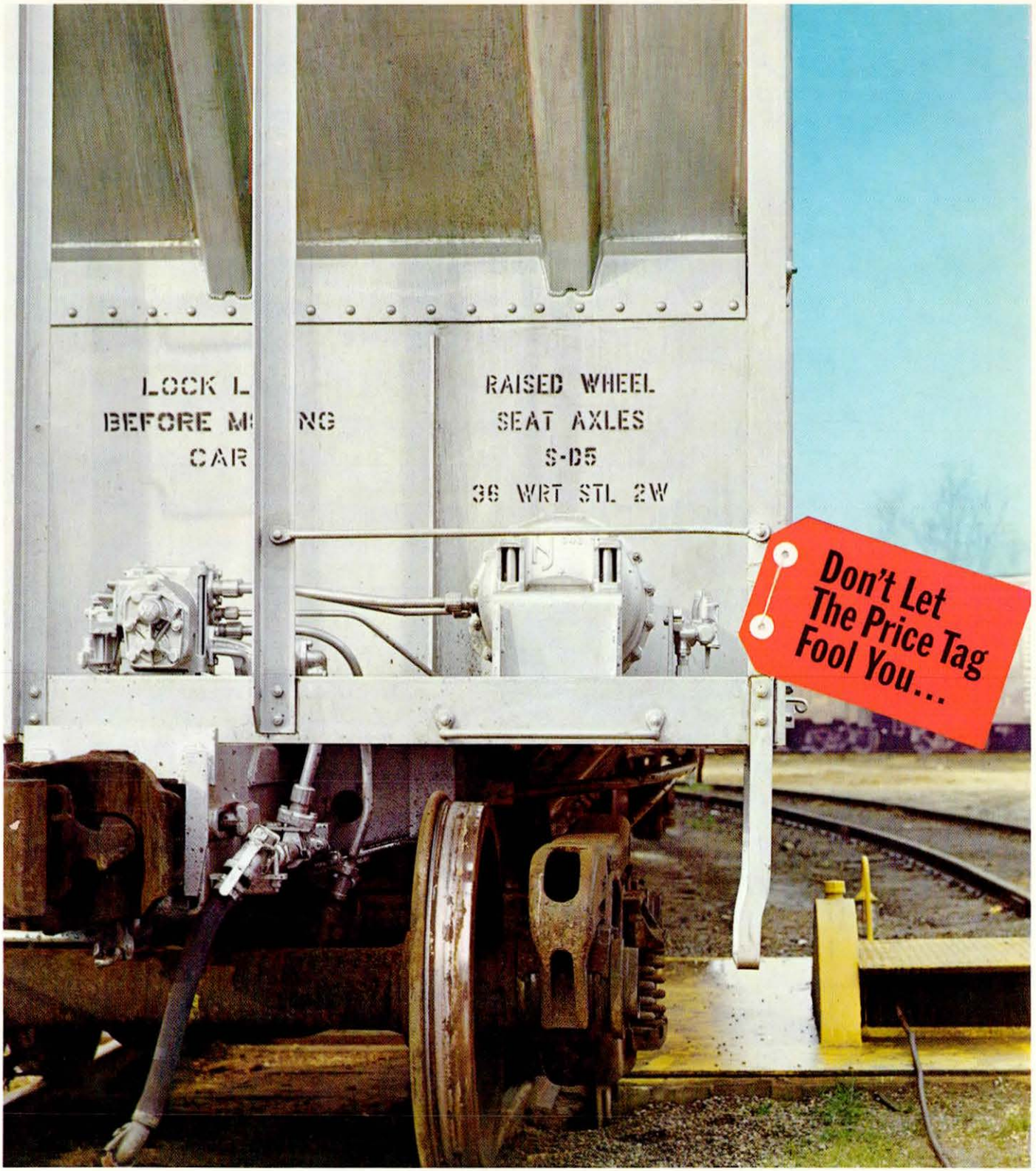
● **Era of the 'second look.'** What happened then? The era of the second look began. Penn-Central was threatened by a series of court cases pushed by N&W. ACL/SAL is still in the courts (despite some spectacular protective agreements with objecting labor organizations). N&W-C&O's application for a hearing was "indefinitely postponed" by the ICC (and N&W-C&O immediately asked for reconsideration and got a hearing date at year's end). The Rock Island case continued to capture headlines through the summer. It was shoved into the back pages of financial journals in the fall, when the trouble brewing between Penn-Central and N&W erupted into an open, bitter contest at the indemnification hearings for E-L, D&H and B&M.

By year-end, the log-jam of merger cases at the Commission was at an all-time high. In November, the ICC gave the nod to C&O for control of the CSS&SB. Late in December Commissioner Charles A. Webb recommended that N&W be directed to take in E-L and D&H, and that inclusion of B&M be left to the discretion of N&W (because of B&M's serious financial problems). N&W indicated it would fight the order.

On the last business day of '66, the ICC acted upon the N&W-C&O petition for reconsideration of the order indefinitely postponing hearings on their merger by agreeing to have a hearing on the merger proposal in April. The new year was barely a few days old when the Commission also agreed to rehear the Northerns' merger case. The merger situation at the end of '66 was getting even more complex as industry recovery in the mid-sixties began to threaten merger exchange ratios posted when railroads finished their original studies—often years before the ICC arrives at a yes-no point.

● **Thunder in the East.** Industry attention during the last quarter of '66 was, of course, centered on the row that grew and grew from the Commis-

*(Continued on page 79)*




# aluminum cars are the least expensive freight cars you can own (or lease)

# Experience—and cost accounting —prove aluminum cars will actually cost less and earn more over their lifetime than steel cars.

You do pay a premium, initially, for an aluminum freight car. It averages about $4,000 over the price of a steel car. (A recent bid showed a spread of only $2,300.) But when you consider the total cost of the cars and their revenue-producing capacity over their service lifetime, there's no question that the aluminum car has a major advantage.

Basic, of course, is the lower tare weight and higher capacity of the aluminum car. A 4,750 cu. ft. aluminum covered hopper can carry 13,500 lbs. more payload than a typical steel car of comparable size. In cars ranging from 2,600 to 2,900 cu. ft., aluminum gives you a 16,000 lb. payload advantage over steel.

### Extra Payload Pays Off

With this sort of payload advantage, it doesn't take many trips per month for an aluminum car to produce a sizable extra revenue. The following table shows how much added revenue an aluminum car can produce on two-turn-arounds per month, with various per-ton rates:

### Added Revenue Earned By Aluminum Covered Hopper Car Over Comparable Steel Car—Based on 63¾ Ton Bonus Payload

| Rates Per Ton | Revenue Additional Per Trip | Revenue Additional Per Month | Revenue Additional Per Year | Revenue Additional Per 15 Years |
|---|---|---|---|---|
| $ 1.00 | $ 6.75 | $ 13.50 | $ 162.00 | $ 2,430.00 |
| 2.00 | 13.50 | 27.00 | 324.00 | 4,860.00 |
| 3.00 | 20.25 | 40.50 | 486.00 | 7,290.00 |
| 4.00 | 27.00 | 54.00 | 648.00 | 9,720.00 |
| 5.00 | 33.75 | 67.50 | 810.00 | 12,150.00 |
| 6.00 | 40.50 | 81.00 | 972.00 | 14,580.00 |
| 7.00 | 47.25 | 94.50 | 1,134.00 | 17,010.00 |
| 8.00 | 54.00 | 108.00 | 1,296.00 | 19,440.00 |
| 9.00 | 60.75 | 121.50 | 1,458.00 | 21,870.00 |
| 10.00 | 67.50 | 135.00 | 1,620.00 | 24,300.00 |

Thus, at the end of 15 years, with two-turn per month service and a conservative grain rate of $4.00 per ton, the aluminum car will earn $9,720 more than the steel car.

### Lower Operating Costs

Extra earning capacity, however, is just one of the long-term financial benefits that aluminum cars give their owners. Substantially lower operating costs is another.

Because it is 13,500 lbs. heavier on the empty return trip, a steel car travels more ton-miles than an aluminum car in the same service. Ton-mileage, of course, is directly related to operating costs. With less ton-mileage, an aluminum car will require less train fuel, less locomotive maintenance and lubrication, less maintenance of way.

### Maintenance Slashed

An aluminum car itself requires much less maintenance than a steel car. Aluminum won't rust, so the car needs no protective painting. Aluminum also resists corrosion and protects cargoes from contamination, so expensive interior coatings are not required. Interior coatings or linings for steel cars cost about $700 per application, and must be replaced several times during the life of the car.

Reynolds economists have estimated that an aluminum open hopper or gondola car in unit train coal service would save over $4,000 in maintenance costs in a 20 year period. This is because the average steel car's side sheets, slope sheets, and crossridge sheets must be replaced at least once in 20 years of coal service; experience indicates this is not necessary with aluminum coal cars.

### Extra Dividend in Scrap

There is one more major financial factor to be considered with aluminum cars: scrap value. At the end of its service life, a typical aluminum-body car will yield about 15,000 lbs. of aluminum scrap. (The aluminum car is really an aluminum-body car, with 15,000 lbs. or 30% of its tare weight being aluminum.) Conservatively, an aluminum car would be worth $2,200 more in scrap value than a similar steel car.

### Total Cost Analysis

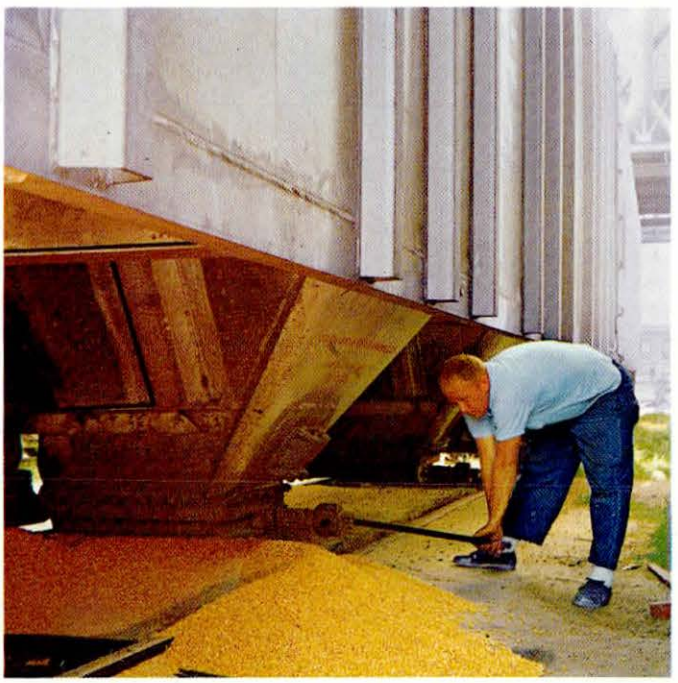
One railroad executive recently analyzed all these factors as they applied to 150 aluminum covered hoppers for general service. He found that the projected 15 year savings in operating costs, maintenance, and scrap value would completely cover the premium in first cost of the cars, and yield an extra savings of $97 per year per car. This study did not take the additional payload and revenue capacity of the aluminum cars into consideration.

Aluminum cars command higher per diem rates for off-line service, so their extra earning power is not limited to "captive" service.

### Added Per Diem Revenue with Aluminum Cars

| Year | Aluminum Car Value For Per Diem Per Unit (1) | Per Diem Rate | Steel Car Value For Per Diem Per Unit (1) | Per Diem Rate | Differential Per Diem Rate | Added Revenue For Aluminum Cars Per Unit Per Year (2) |
|---|---|---|---|---|---|---|
| 1 | $19,000 | $6.15 | $15,000 | $6.15 | — | — |
| 2 | 18,430 | 6.15 | 14,550 | 4.50 | $1.65 | $ 297.00 |
| 3 | 17,860 | 6.15 | 14,100 | 4.50 | 1.65 | 297.00 |
| 4 | 17,290 | 6.15 | 13,650 | 4.50 | 1.65 | 297.00 |
| 5 | 16,720 | 6.15 | 13,200 | 4.50 | 1.65 | 297.00 |
| 6 | 16,150 | 6.15 | 12,750 | 4.50 | 1.65 | 297.00 |
| 7 | 15,580 | 6.15 | 12,300 | 4.50 | 1.65 | 297.00 |
| 8 | 15,010 | 6.15 | 11,850 | 4.50 | 1.65 | 297.00 |
| 9 | 14,440 | 4.50 | 11,400 | 4.50 | — | — |
| 10 | 13,870 | 4.50 | 10,950 | 4.50 | — | — |
| 11 | 13,300 | 4.50 | 10,500 | 4.50 | — | — |
| 12 | 12,730 | 4.50 | 10,050 | 4.50 | — | — |
| 13 | 12,160 | 4.50 | 9,600 | 3.58 | 0.92 | 165.60 |
| 14 | 11,590 | 4.50 | 9,150 | 3.58 | 0.92 | 165.60 |
| 15 | 11,020 | 4.50 | 8,700 | 3.58 | 0.92 | 165.60 |
| Total | | | | | | $2,575.80 |
| Averages | | $5.380 | | $4.426 | $0.954 | $ 171.72 |

(1) Straight line depreciation at 3% per year
(2) Assumed 180 off-line days per year



When a lease arrangement is preferred to outright purchase, Reynolds specialists work with the railroads and leasing companies to get interest rates comparable to—if not better than—those for steel cars.

If you're planning to invest in new freight cars, look at the total cost, the total earning power, of the cars. You'll see why more aluminum cars are going into service every year . . . more of them made with Reynolds Aluminum than any other.

The facts on the previous pages show how aluminum covered hopper cars reduce costs and boost revenue for their owners. Other types of aluminum cars offer these benefits, too: Open hoppers, gondolas, and tank cars all cost less to operate and maintain when they're made of aluminum—and have extra payload capacity, higher scrap value, as well.

The service records of these cars show that their day-to-day economies add up to long-term financial benefits.

Aluminum's light weight, strength, and corrosion resistance pay important dividends in car components and special freight equipment as well as in rolling stock—as proven daily by aluminum car doors, crossmembers, and bulkheads.

Let a Reynolds railroad specialist show you the long-term advantages of aluminum cars and equipment. Contact your local Reynolds office for details or write Reynolds Metals Company, P.O. Box 2346-XY, Richmond, Virginia 23218.

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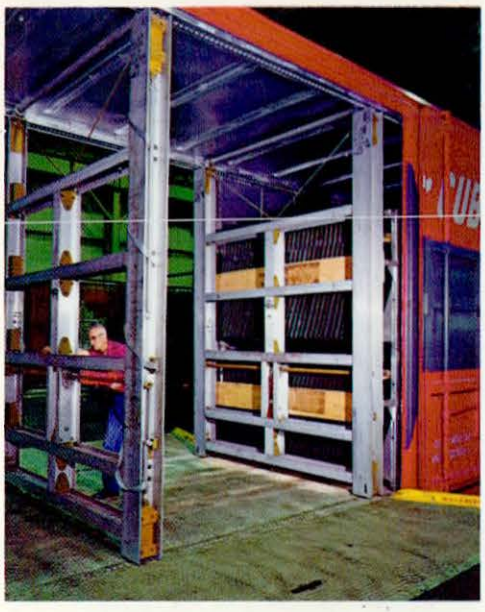


Strong, lightweight bulkheads of Reynolds Aluminum guard bulky freight.

Gondola cars made with Reynolds Aluminum, in daily unit train coal service.

Tough Reynolds Aluminum helps tank cars serve longer with corrosive cargoes.

# NYC–PRR decision may be off until the spring

*(Continued from page 74)*
sion's conditions attached to the April green light it gave to Penn-Central: absorption of bankrupt New Haven and the payment of indemnities to E-L, D&H and B&M (which, at that point, were presumed to be heading into N&W as a condition of the Commission's approval of the N&W, Nickel Plate, Wabash merger approved back in '64). The three, when the Commission reopened hearings in November to determine how much Penn-Central should pay them, contended they should be made whole for any reduction in their capital value between the time of effective Penn-Central merger and the time they were taken in by N&W. PRR and NYC balked.

N&W backed off, insisting the Commission should consider its merger plan with C&O first and, if that was approved, that N&W-C&O would take in the three plus Reading and Central of New Jersey under the umbrella of a subsidiary company structured to give N&W-C&O the benefit of the five roads' considerable tax-loss carry forward under changes they wanted in the tax laws.

PRR and NYC began to show the strain of delay. Both the chairman of the PRR and the chairman of the ICC expressed fears that delay would cause the agreed-upon merger to come apart at the seams.

● **Delay could 'kill it.'** S. T. Saunders, PRR's chairman, assailed the N&W as trying deliberately to dynamite Penn-Central because it (N&W) has been benefiting from delay. Saunders described N&W as having "everything to gain and nothing to lose in prolonging as long as it possibly can, the tremendous competitive advantages gained from its own merger with the Nickel Plate and Wabash which have been in effect for more than two years." Saunders, early in December, said that the delay is of great consequence to the economy of the East and that "indefinite delay of the merger will kill it. We simply cannot continue to operate these properties for a substantial period of time in suspense."

The delay to Penn-Central finally focused in a hearing last week in the Supreme Court. At issue was the contention of N&W-C&O and satellite roads that the merger of PRR and NYC should be stayed. A series of actions at the Commission and in lower courts had put Penn-Central's fate in the hands of the Supreme Court. Both the Commission and a three-judge Federal Court in New York had refused to delay Penn-Central's effective wedding day until the matter of protective agreements for E-L, D&H and B&M have been agreed upon.

The Supreme Court's one-day hearing January 9 makes a decision unlikely until spring.

● **The effects of delay.** But the situation at PRR and NYC is beginning to cost the roads more than just time. Combined planning programs are unmeshing as delays keep multiplying. Morale problems on both roads are multiplying. Capital investment programs are being postponed—forcing separate decisions where action cannot be delayed. Both roads are leery of every passing day of delay. ■

## The Merger Situation at a Glance

### In the East

| | |
|---|---|
| **Pennsylvania/New York Central** | Merger approved April 27, but delayed by appeals to ICC, federal district court and U. S. Supreme Court. |
| **C&O/B&O control of Western Maryland** | Favorable examiner's report issued Aug. 3, 1965. Before the Commission. |
| **E-L, D&H, B&M inclusion into N&W** | Commissioner Webb recommended Dec. 22 that N&W absorb E-L and D&H and be given the option of taking over B&M. N&W announced early this year that it will take exception to the order. |
| **N&W/C&O merger (including B&M, CNJ, D&H, E-L and Reading)** | Hearings scheduled for April 17. |

### In the Southeast

| | |
|---|---|
| **ACL/SAL merger** | Approved Dec. 13, 1963. Case has been in Federal court at Jacksonville since late in 1965. Late in '66, ACL and SAL agreed to protective conditions for employees with unions that may speed the merger. |
| **Illinois Central control of L&N** | Hearings deferred at railroad request. |
| **IC/Gulf, Mobile & Ohio** | Studies suspended. |

### In the West

| | |
|---|---|
| **Great Northern, Northern Pacific and Burlington merger** | Hearings in re-opened case set for March 6. |
| **C&O control of CSS&SB** | Approved Nov. 2. |
| **C&NW control of CRI&P**<br>**UP-CRI&P merger**<br>**SP purchase of CRI&P line**<br>**ATSF purchase of line and trackage rights from CRI&P** | Consolidated hearings began May 4. |
| **Missouri Pacific merger with Texas & Pacific** | Hearings deferred at applicant's request. |
| **MoPac control of C&EI** | Before the Supreme Court. |
| **Control of Alton & Southern by Cotton Belt**<br>**Purchase of A&S by Missouri Pacific and Mississippi River Corp.** | Consolidated hearings began Aug. 8. |
| **Missouri Pacific control of Santa Fe** | Hearings not yet scheduled. |
| **C&NW merger with CGW** | Favorable examiner's report issued March 3. Awaiting final ICC action. |
| **C&NW merger with Milwaukee** | Hearings scheduled for Jan. 16. |

'67 OUTLOOK

By ROBERT W. McKNIGHT
Signaling & Communications Editor

# S&C outlays will hold steady

## Spending in '67 may even be slightly higher than in 1966.

While total capital investment by railroads is expected to dip in 1967, spending for signal and communications hardware promises to be at least as good as 1966—and possibly better.

Best estimate now is that U.S. and Canadian Class I railroads will spend about $85 million on S&C equipment this year—with transit systems in the two countries adding an additional $15 million for a total of $100 million.

This is a projected figure based upon reports from 44 signal officers and 40 communications officers. The reporting properties normally account for about half of total S&C spending.

The figure does not include the $35-million contract that the Bay Area Rapid Transit District will award this year for an automatic control system. While bids are due Feb. 1 (from General Electric, General Railway Signal, Philco, Westinghouse Air Brake and Westinghouse Electric) there will be no actual outlay of money before 1968.

• **Where the money will go.** The 44 signal engineers responding to the Railway Age poll have budgeted $28,397,-452 for signals, power switches, retarders, flashing-light signals and gates, relays, CTC and interlocking control machines.

In addition to upgrading interlockings from manual to remote control, installing centralized traffic control and improving highway crossing protection, increased emphasis will be placed on consolidating dispatchers' positions. There will be considerable moving of CTC machines to new, central headquarters. Also, several railroads will purchase new pushbutton CTC control machines to handle territories formerly requiring several CTC machines.

• **Rapid transit signaling.** While the biggest news to come out of 1967 will be announcement of the contractor for BART's automatic train control system there will be considerable other transit activity.

Transit projects that involve signaling and communications facilities include Chicago's Lake Street cab-signaling system now being installed, Cleveland's airport extension using cab signaling, the Long Island's electrification extensions, and the Massachusetts Bay Metropolitan Transportation Authority's South Shore extension.

Chicago Transit Authority is well along on its automatic car identification system installation. WABCO scanners are being installed at three locations to identify some 1,200 rapid transit cars. Mileage calculations will be computed from CTA's GE computer, based on the identity checks reported by the ACI system. The resulting information will be used for maintenance purposes.

ACI is also making big news in line-haul railroading. Along Pennsylvania tracks near Tyrone, Pa., three silent sentinels are watching every train that passes. Each, connected to its own recording devices, makes a record of the cars passing, including some cars that carry colored stripes and metal tags. These cars—such as 40 unit train hoppers, 10 tank cars and 10 piggyback flats—are taking part in the AAR's ACI tests. The sentinels— one each made by Abex, Sylvania and Wabco—produce a hard copy message in their respective bungalows in order to eliminate any variables due to communications lines, tape punches or readers. The printers are directly connected to the logic units so that the output reflects the accuracy of the wayside scanner and the decoding equipment.

• **Lab tests, too.** In addition to field testing with the three systems' scanners operating side-by-side under nearly identical weather and operating conditions, the AAR Research Center in Chicago will conduct environmental and other tests on labels and equipment that cannot be duplicated by field testing.

These lab tests will expose the equipment to the extremes of the temperature and humidity range, variations in ambient light, and various environmental effects such as fumes, radio interference, spilled lading, dirt accumulation, snow, ice and rain.

By late spring or early summer, the lab and field tests should be completed and evaluated. The AAR's Data Systems Division and the Research Center hope to announce the name of the chosen system by July 1. Prompt AAR board action is planned, so that a nationwide ACI system could be operative by July 1, 1968.

• **Car Data Center.** Action may be taken this month by the AAR board of directors upon New York Central President Alfred E. Perlman's proposal that the AAR establish a centralized freight car movement information system. The basis of such a system would be the ability to furnish accurate, timely car initials, numbers and location. It is generally agreed that ACI would be the means of supplying this basic data.

• **Communications spending.** Reports from 40 railroad communications officers indicate they will spend $23,-945,397 during 1967. Material to be purchased includes voice and telegraph carrier equipment, microwave, two-way radios, dial telephones annd automatic telephone exchanges, and line wire and pole line hardware.

Specifically mentioned were plans to install over 800 route miles of microwave systems, 281 two-way radios and over 126 miles of new line wire for pole lines.

Newcomers to the microwave ranks include the Burlington and the Illinois Central. Other roads—Northern Pacific, Union Pacific and Santa Fe—are well along toward complete systems.

Most railroads are installing solid-state microwave systems which operate off low-voltage direct current supplies (12 volts) or batteries. The majority of these systems have no vacuum tubes, except for the klystron tube which generates the 6,000-million-cycles-per-second microwave beam. One manufacturer (RCA) already has a completely solid-state microwave system, and others are developing such systems. One rail-

road, having installed microwave nearly 10 years ago, is replacing an older vacuum tube system with a solid-state system operating off battery voltages.

• **Telpak fog lifting?** It may take a Philadelphia lawyer to unscramble the Telpak tariff situation. American Telephone & Telegraph Co.'s bulk communications rates on A and B service should be abandoned, says the telephone carrier, to comply with Federal Communications Commission orders. For larger services (C and D are 60 and 240 voice channel capacities) increased rates were to be filed Jan. 9 and to become effective 30 days later.

Loud protests have been heard from practically all Telpak users. "You just cannot re-engineer your communications in 30 days," comments one road's communications engineer. For small users, without a communications department, re-engineering would have to be performed by telephone companies. "They'll be swamped with requests for service changes," says another communications engineer. From the practical standpoint of making circuit changes to meet the new Telpak tariff, the February in-service date is just too soon.

Many Telpak users are considering petitioning the U. S. Supreme Court to review the lower federal district court opinion that upheld the FCC order. Others, including New York Central, filed petitions with the FCC asking for more time between the scheduled filings of the new tariffs and the date by which they are to become effective.

AT&T, in supporting the requests of large users for more time, said: "Many users, including the petitioners, have extensive and highly complicated networks. The elimination of Telpak A and B, together with the concomitant changes in the rates for private line telephone and telegraph grade services which may be called for in compliance with the Commission's order, will inevitably dictate major restructuring of these networks.

"The users of these services must evaluate a multitude of combinations of a wide range of alternatives including Telpak, private line telephone, private line telegraph, WATS, and message toll telephone service, as well as possible variations in their own methods of operations."

AT&T said the problems of Telpak users fully support the requests for more time. Accordingly, "Ma Bell" has asked the FCC to extend the effective date of the tariffs to be filed Jan. 9 "to a date which will meet the requirements of the users for reasonable time to accomplish the necessary modifications." ■

**ILLINOIS CENTRAL:** First link in a microwave system extending some 1,000 miles along IC's mainline has been completed between Mays Yard, New Orleans, and Jackson, Miss., 181 miles. Microwave stub lines will extend to Vicksburg, Miss., and Paducah, Ky.

# IC microwave marches northward

Typical of the newcomers to the list of railroads having microwave systems is the Illinois Central. Work is now under way on the first link in a New Orleans-Chicago network. Contract for the microwave equipment on this 181-mile system has gone to Lenkurt Electric Co., Inc., for more than $300,000.

During this year, the nine-station microwave system—two terminals and seven repeaters—will be completed between Jackson, Miss., and New Orleans. IC management has authorized extension of the microwave system to Chicago with branches to Vicksburg, Miss. and Paducah, Ky.

Initially the system will be used to provide voice and data circuits. Later, IC will install VHF radio base stations at selected microwave station sites to provide communications between trains and wayside dispatching and operating offices.

The New Orleans-Jackson microwave system will utilize Lenkurt's type 76 microwave radio equipment and types 46 and 34 multiplex channelizing equipment. An alarm system will enable the IC master control station at Mays yard, New Orleans, to interrogate all of the microwave stations for ascertaining possible failures, such as signal or power failure. Hot standby microwave radio equipment will be used throughout this initial microwave link. In areas of subnormal propagation, space diversity will be used.

Because the microwave radio signal is beamed from station to station on a line-of-sight basis, it is important that terrain features or man-made objects do not obstruct such a signal. To assure line-of-sight transmission, IC communications engineers made a study of topographic maps to find high ground on or near the tentative microwave station locations.

To check these locations for their line-of-sight quality, two 102-foot portable towers were used by IC communications men. Working from the south end of the proposed microwave link, these portable towers were erected at Mays yard and La Place. Then a man climbed to the top of each tower and established radio contact. One man is the observer while the other does the signaling.

During daylight when the sun is shining, one man uses a special mirror to flash the rays of the sun. The observer reports seeing the flash of sunlight. Then he moves down a few feet on his tower. Again the sun is flashed to him. When he moves to a position down the tower where he loses sight of the flash, it is determined that the next highest position is the proper one.

For cloudy days and at night, a telescopic pole with a revolving white light was used. Using these elevations of signaler and observer, calculations were made considering zone clearances, refraction of light, etc., to determine proper microwave beam elevations to obtain line-of-sight transmission without interference.

The portable towers are made of aluminum piping bolted together and held steady by guy wires.

# MONEY TALK

BY JOHN MITROS

## What are the oracles saying about '67?

Analyses of railroads circulating in financial circles are tracing rail performance in the kind of upward spiral characteristic of growth industries. The facts in '66 spell record year and practically all the analysts predict that industry ton-mile production (and, it follows, gross revenues) will rise moderately to new record levels in '67.

What about net income? Like all seasoned prophets, the analysts start hedging when the faithful demand the time and place and extent of payoff for prayerful attention to promises. Most of them say industry net in '67 will be around $800 million. Why won't '67 net earnings equal the $925 million earned in 1966? Especially with tonnage and revenues on the rise? The analysts say wage increases (estimated at $250 million) plus $50 million needed to cover the increased cost of fuel, material and money add up to a $300 million drag on industry earning power in '67.

## Profit-squeeze prophets

The manager of the transportation department of Moody's Investors Serice, David M. Day, foresees rail net income being squeezed between rises in wage, material and money costs on the one hand, and a slowing in the rate of rise in rail tonnage on the other. He pegs tonnage increases at 1% to 2% and says '67 will be a prosperous year —with net income for the Class I carriers approximating '65's $816 million.

Samuel P. Mason at the Chase Manhattan Bank says a 3% to 4% rise in ton-mile production will partially cushion higher costs in '67. Additionally, "Railroads will be able to offset a substantial part of their increased costs through further modernization and economies, but progress in this area becomes difficult during a time of readjustment and rising costs." Mason also believes industry capital spending will continue at high levels though short of the amount spent in '66.

## Long-range optimists

Hayden, Stone Inc.'s distinguished veteran analyst, Pierre Bretey, admits the profit-pinch may hold industry net down to the $800 million level (or even force it as low as $600 million) but holds firmly to his thesis that railroads are in a growth phase. "Subject to cyclical interruptions . . . ton miles should reach one trillion by 1975, and such growth should sustain the industry's net income well beyond the $925 million the industry earned in '66," he observes. Bretey also predicts a 30% rise in revenues to go with the trillion ton-mile year in the industry's future.

W. Glenn Cameron, institutional securities analyst for Blair & Co., also thinks the industry is in the initial stages of a prolonged period of sustained growth. Cameron says railroads "will witness during the next five to ten years technological changes undreamed of five years ago," and that the industry will experience an acceleration of the upward earnings trend already visible.

## The immediate future

Some analysts figure the carriers can absorb enough of their added costs to avoid any serious bending of the industry's upside trends.

Bernard B. Badgley, of Gude, Winmill & Co., says he looks forward to '67 "as a year of many important developments in the industry as it may quite possibly mark the resurgence of national recognition of the essential character of the growing transportation needs of our country."

Elizabeth Weinmann of Vilas & Hickey sums up her views this way: Rail managements, despite problems, have taken sufficient advantage of the good economy during the past several years to improve operating efficiency to a point where temporary slumps can be offset. She foresees "a continuation of the forward movement of the industry at a slightly slower pace" because: the Vietnam War will continue beyond '67; rails will improve "other income" accounts; increased acreage is authorized for '67 plantings; suspension of the investment tax credit wont' affect many railroads in '67; the competitive position of the industry has been stabilized and strengthened by both technique and technology; selective rate increases (and perhaps even a small over-all rate increase) may help offset increased costs, and, finally, '67 may prove to be a key year for mergers.

## Analyzing the analysts

Professional caution may be prompting many analysts to over-estimate the brake on the industry's earning power in '67 and to under-estimate internal and external pluses.

For example, if the industry continues to automate and improve at the rate of the last five years, the impact upon the industry in '67 might not be $300 million—but slightly lower than $200 million. Also, substantial savings might come in the second half if some major mergers get a green light in the spring.

Then there is the matter of the increased tonnage most analysts foresee for '67. With business already at record levels, additional tonnage will produce disproportionately large contributions to income. Shipper advisory boards predict a 1.8% increase in carloadings for the first quarter—about a 5% increase in ton miles. Improving bad-order ratios and the 22,000 cars that represent the net gain to the carfleet from the 105,000 new and rebuilt cars put to work in '66 could have a wholesome effect upon earnings in a time of rising traffic.

Another factor that could result in a flood of new traffic for the railroads in '67 is the fact that truckers may have to raise their rates from 5 to 7% by mid-year.

The profit-squeeze in '67 may force distribution managers to look to the rails for savings—as traffic men in autos, coal, chemicals and other industries already have. Many managers in key industries are already doing just that. One chemical shipper, for example, shifted 10% of his truck tonnage to the rails and saved a cool $116,000 annually (RA, April 25, p. 31). The rails, with only modest (if any) rate increases in sight, can expect to benefit, perhaps dramatically. This was at least suggested by a recent Railway Age survey of shippers (RA, Dec. 19/26, p. 40).

So, what about '67? The strategic employment of "ifs" is the secret to the success of astrology—and prophecy. If the economy stays humming and if the carriers keep furnishing equipment to shippers, rail production of transportation could rise to about 785 billion ton miles, push gross revenues to 11.1 billion—and generate a billion in net for the first time in history. We think '67 is a cinch to match '66, and a pretty good bet to do better than that.

'66 REVIEW

BY BURTON N. BEHLING, VICE PRESIDENT, ASSOCIATION OF AMERICAN RAILROADS, AND DIRECTOR, BUREAU OF RAILWAY ECONOMICS

# Freight traffic rose for fifth straight year

**Railroads continued their modernization drive last year despite adverse factors. Record-breaking capital outlays came close to the $2-billion mark.**

**HIGHLIGHTS OF 1966:** With the general economy again operating at record high levels in 1966, the railroads in this favorable environment continued to attack their basic problems and their progress gained momentum.

For the fifth consecutive year there were substantial gains in freight traffic, stimulated by improved equipment and service and attractive rate adjustments made possible by advances in operating efficiency. Passenger traffic continued its long downtrend, but steps were under way in cooperation with the U.S. Department of Commerce to develop new equipment and improved roadbed for a demonstration project in high-speed and frequent rail transportation along the densely populated Northeast Corridor.

● **Freight charges declined.** The increasing tempo of inflationary pressures in the economy generally has been a matter of growing concern. As for the railroads, however, the average level of their freight charges again declined in 1966, as it has in every year since 1958. Over this entire period the decline has amounted to 15%, contrasting with an increase of 14% in the Consumer Price Index. This important counter-inflationary force by the railroads reflects increasing operating efficiencies, the recent high levels of capital spending for modernization of equipment and other facilities, competitive restructuring of rail rates, and rising freight traffic volumes.

Railroad earnings made a further modest recovery in 1966 from the perilously low level to which they had fallen in the period from 1957 to 1961. Greater efficiency in the use of facilities and manpower, as well as a relatively high level of freight traffic, offset further substantial increases in wage and material costs and in payroll taxes. A new tax of two cents per man-hour paid for, effective Nov. 1, 1966, was enacted to support a carrier-financed program of temporary supplemental annuities for long-service employees retiring after June 1966.

● **Record capital outlays.** Notwithstanding the deterrent effects of tight credit conditions and high interest rates on new equipment obligations, the railroad industry continued its modernization drive with record-setting capital expenditures that approached $2 billion. Investment in "private" freight cars by other than Class I railroads also increased.

Although the disruptive impact on railroad equipment programs of legislation suspending the investment tax credit from Oct. 10, 1966, to Jan. 1, 1968, did not influence capital spending in 1966 because of continued eligibility of commitments previously made, the adverse effects seem certain to be severely felt in 1967 and beyond unless early action is taken to shorten the suspension period.

● **Merger task ahead.** As the railroad merger movement proceeded slowly forward in 1966, it was apparent that a large part of the complex task of molding the carriers into a limited number of well-conceived systems for greater efficiency and improved service still lies ahead.

Holding forth the promise that development of a well-balanced national transportation policy may now be in the making, the most constructive transportation legislation enacted in 1966 created a new Department of Transportation to coordinate at Cabinet level the various promotional, safety and research activities of the federal government in this field.

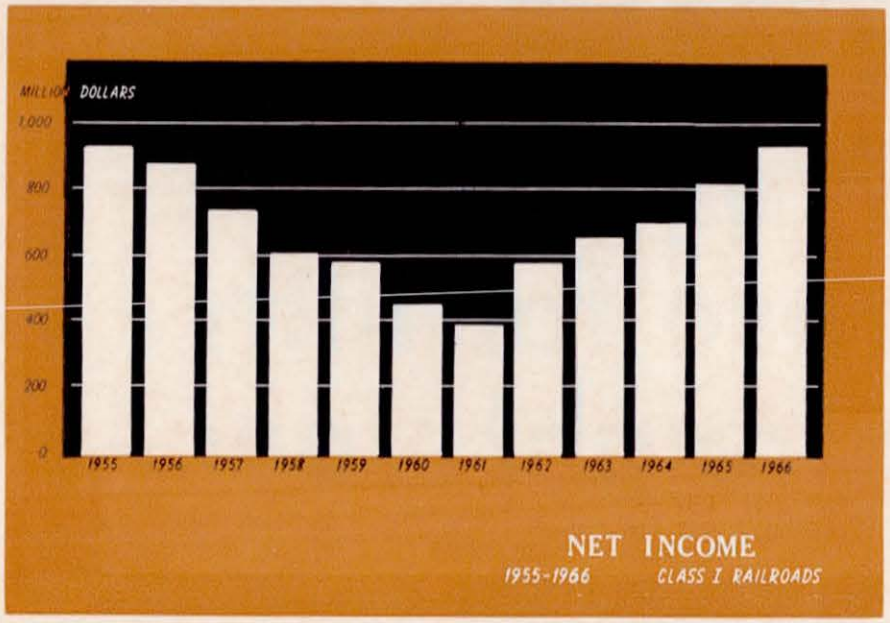
# Revenues and net earnings made further recovery last year

The new year began with less buoyancy in the economy and gathering indications of softening of recent strong gains in economic activity. Although the need to check inflationary pressures has been recognized as an important consideration, unresolved questions still remain with respect to an appropriate mix of government spending, tax and monetary policies in the present circumstances. The magnitude of defense expenditures, which in reference to Vietnam had been substantially underestimated a year ago, also is an uncertain factor for 1967. Although, it seems reasonable to expect that growth of the economy in 1967 will be slower than in the recent years of rapid expansion.

On this basis, and with stepped-up marketing of railroad services, some further over-all gain in freight traffic of the railroads may be anticipated, but the increase is likely to be considerably smaller than it has been in recent years —perhaps in the range of 3%.

• **Earnings outlook.** The outlook for railroad earnings is less favorable. With the prospect that increases in wage and other labor costs, payroll taxes and material prices may aggregate as much as $300 million on a full-year basis, the railroad industry will find it difficult to hold net earnings near the 1966 level of approximately $925 million. The possibility of an increase in the corporate income tax rate is another financial cloud. Close attention to all available measures of economy and efficiency will be essential if a serious squeeze on earnings is to be avoided in the year ahead.

Recovery of railroad earnings over the past five years from the extremely low level to which they had fallen in 1961 does not alter the fact that this industry is still a low-profit industry in comparison with American enterprise generally. An unusually high ratio of labor costs amounting to more than half of the revenue dollar, the cost impact of current inflationary trends in material prices, and the necessity to maintain and improve a vast complex of plant and equipment make essential a constant emphasis on volume-building of profitable traffic that will add more to revenues than to all the costs that will be incurred in the foreseeable future to handle it with maximum efficiency.




Improvement of railroad earnings is vitally important in order that railroads may progess their programs of needed capital investments for improvement of their facilities on a sound financial basis. This basic requirement is all the more evident when it is considered that retained earnings (even in the relatively good year 1966) and depreciation cash flow provided only about 60% of railroad capital expenditures amounting to nearly $2 billion. Financing the remainder required the assumption of additional debt and the liquidation of other assets. In these circumstances the disruptive impact of temporary suspension of the investment tax credit on railroad improvement programs stands as an impediment to the sustained effort of the carriers and other suppliers of equipment to meet the transportation requirements of a growing economy in the years ahead.

## Financial results

Railroad revenues and net earnings made further recovery in 1966 from the trough into which they had dropped after the mid-1950's. Yet rail earnings generally continued to lag behind the earnings rates of most other industries and made only a limited contribution toward providing the capital funds to finance 1966's record outlays for additions and betterments. Encouraging as the steady railroad gains in the 1961-1966 period have been, it is important that they be viewed in proper perspective.

Railroad gross revenues in 1966 were about 5% above 1965, some 16% above 1961, and approximately equal to the all-time high of 1953. By comparison, Gross National Product in current dollars in 1966 was about 8% above 1965, some 40% above 1961 and approximately double the level of 1953.

Railroad net income in 1966 was about equal to 1955's record high but corporate profits of all industries in 1966 are expected to exceed the 1955 total by 80%.

Funds generated through the income account—retained income, depreciation charges, and other capital consumption allowances—will more than cover the record capital outlays of business generally in 1966 but for the railroads will provide only about 60% of such needed funds.

The railroads' rate of return on net investment—the highest in a decade but barely 4%—compares with similar ratios for other regulated carriers (based on ICC data after taxes for the year 1964, the latest available) of 13%

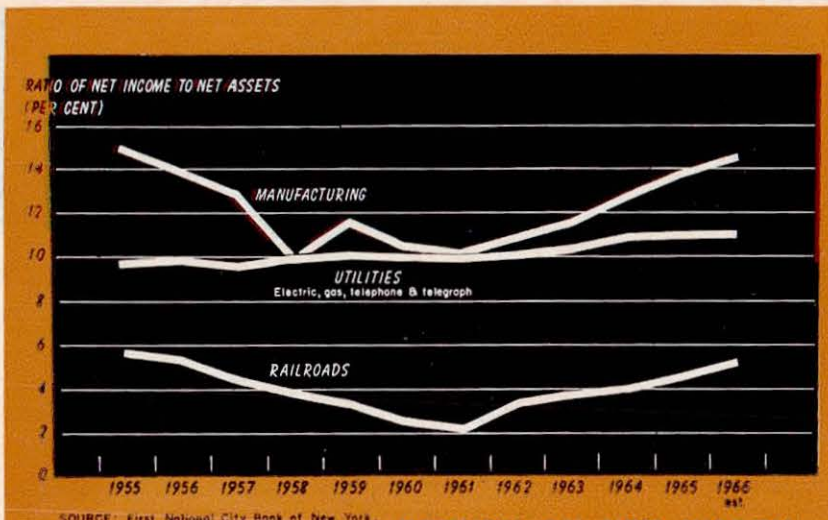
for intercity motor carriers of property, 15% for intercity motor carriers of passengers, 9% for water carriers and 10% for oil pipelines.

The ratio of net income to net worth (shareowners' equity) for leading corporations is published each year by the First National City Bank of New York. The latest such listing (for 1965) shows railroads standing 71st among 73 industry groups. Air transport was first with a ratio of 27.5%, common carrier trucking was second with 22.9%, and the average for all corporations was 11.1%. The railroad ratio was 4.6%; for 1966 it will be about 5.2%.

The 6-year decline and 5-year recovery of rail net earnings are set forth in the accompanying Table 1. Data in this and other tables herein are for Class I line-haul railroads unless otherwise noted. It is of interest that between 1956 when railroads last earned a return of about 4% on investment and 1966 when the earnings rate regained that modest level, the aggregate deficiency below a 4% return was $2.8 billion.

An estimated income account for 1966 and analyses of revenues, expenses and taxes, compared with 1965 and 1955, are shown in Tables 2, 3, 4 and 5. Estimated revenues of $10,675 million represent an increase of $467 million over 1965, including a $393-million increase reported by the railroads for the first 9 months and $74 million estimated by the Bureau of Railway Economics to be realized in the last 3 months. Estimated expenses of $8,075 million exceed those of 1965 by $225 million, leaving a $242-million increase in net revenue. After estimated increases of $94 million in taxes and $48 million in rents, the remaining increase carried through to net railway operating income approximates $100 million, resulting in a total NROI of $1,062 million, and a rate of return of 3.97% on an investment of about $26,750 million. After taking into account a $35-million increase in income from other sources and deducting a $25-million increase in interest and other charges, net income shows a $110-million increase to about $925 million.

The estimated increases of $100 million in net railway operating income and $110 million in net income in 1966 over 1965 reflect an expectation that fourth-quarter earnings were somewhat less in 1966 than in the corresponding quarter of 1965. The decrease in estimated fourth-quarter earnings, despite greater freight traffic and revenues, is explained by higher levels of wages, payroll taxes, and material prices in 1966 and by the inclusion in the comparable 1965 quarter of rev-




RETURN ON NET WORTH - LEADING CORPORATIONS
1955 - 1966

## Table 1: Rate of Return and Net Income—1955-1966

| Year | Net Railway operating income (millions) | Rate of return on investment after depreciation | Net income after fixed charges (millions) |
|---|---|---|---|
| 1955 | $1,128 | 4.22% | $927 |
| 1956 | 1,068 | 3.95 | 876 |
| 1957 | 922 | 3.36 | 737 |
| 1958 | 762 | 2.76 | 602 |
| 1959 | 748 | 2.72 | 578 |
| 1960 | 584 | 2.13 | 445 |
| 1961 | 538 | 1.97 | 382 |
| 1962 | 726 | 2.74 | 571 |
| 1963 | 806 | 3.12 | 652 |
| 1964 | 818 | 3.16 | 698 |
| 1965 | 962 | 3.69 | 815 |
| 1966 (est.) | 1062 | 3.97 | 925 |

Note: Statistics are for Class I line-haul railroads unless otherwise noted.

## Table 2: Condensed Income Account—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1965 (est.) (millions) |
|---|---|---|---|
| Total operating revenues | $10,106 | $10,208 | $10,675 |
| Total operating expenses | 7,646 | 7,850 | 8,075 |
| Taxes | 1,080 | 916 | 1,010 |
| Rents (net debit) | 252 | 480 | 528 |
| Total expenses, rents and taxes, excl. Fed. inc. taxes | 8,564 | 9,082 | 9,388 |
| Ratio to revenues | 84.7% | 89.0% | 87.9% |
| Net railway operating income | $1,128 | $962 | $1,062 |
| Net income | 927 | 815 | 925 |

## Table 3: Operating Revenues—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Freight | $8,538 | $8,836 | $9,300 |
| Passenger | 743 | 553 | 545 |
| Mail | 287 | 311 | 302 |
| Express | 118 | 76 | 68 |
| All Other | 420 | 431 | 460 |
| Total | 10,106 | 10,208 | 10,675 |

enues accrued in the first 9 months but held in suspense pending settlement of a dispute over divisions of interline revenues.

Particular attention is called to the fact that the ratio shown in Table 2 differs from the traditional "operating ratio" of expenses to revenues and includes operating rents and taxes, excluding federal income taxes. Such rents and taxes are operating costs which should not be overlooked. The greater significance of the more comprehensive ratio is well illustrated by the fact that for 1966 it is 3.2 points higher than for 1955 whereas the 1966 "operating ratio" based on expenses alone would be slightly lower than the 1955 ratio.

Freight revenue, as shown in Table 3, accounted for 87.1% of total revenues, compared with 86.6% a year earlier and 84.5% in 1955. The estimated total of $9.3 billion represents a new high, topping the earlier record (in 1956) by nearly 4%.

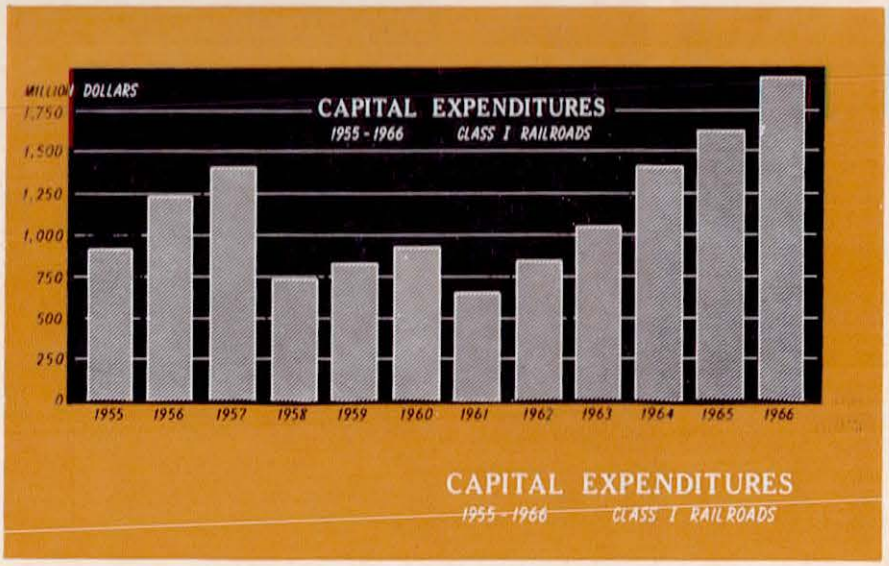
Passenger revenue, estimated at $545 million, included some $15 million added in July and early August when five major airlines were shut down by a strike. In contrast to the decreases registered in the first, second and fourth quarters, third-quarter passenger revenue was up nearly 6% over the corresponding quarter of 1965, and revenue from first class service was up 13%.

Both mail and express revenue declined from the previous year, but mail revenue showed an increase over the 1955 total.

Distribution of 1966 operating expenses among the principal groups of accounts (Table 4) showed little change from 1965. However, compared with 1955, a smaller portion of expenses went for maintenance, reflecting more efficient methods, and a larger share for transportation.

Tax accruals, shown in Table 5, were slightly over $1 billion in 1966, up from $916 million in 1965 but less than 1955's total of $1,080 million. Payroll taxes increased to $440 million in 1966, reflecting (1) an increase in maximum taxable compensation for retirement from $450 to $550 per month per employee, (2) addition of the "Medicare" tax on the same base, and (3) addition of a two-cent-per-hour tax effective Nov. 1, 1966, to support a new company-financed supplemental annuity plan for long-service employees (see "Legislative Activity"). Scheduled increases in tax rates for retirement and "Medicare" plus a full-year cost of the supplemental annuity plan will add about $50 million more to payroll taxes of Class I roads in 1967.

The estimated increase in federal income tax accruals to $225 million in 1966 from $164 million in 1965 is mainly a result of increased taxable earnings. The reduction in "all other" taxes to $345 million from $357 million in 1965 apparently reflects some




## Table 4: Operating Expenses—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Maintenance of way | $1,387 | $1,236 | $1,299 |
| Maintenance of equipment | 1,788 | 1,775 | 1,839 |
| Transportation | 3,770 | 4,020 | 4,110 |
| Traffic, general and other | 701 | 819 | 827 |
| Total | 7,646 | 7,850 | 8,075 |

## Table 5: Railway Tax Accruals—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Payroll taxes | $ 284 | $ 395 | $ 440 |
| Federal income taxes | 414 | 164 | 225 |
| All other taxes | 382 | 357 | 345 |
| Total taxes | 1,080 | 916 | 1,010 |

## Table 6: Capital Expenditures and Purchases—1955-1966

| Year | Gross capital expenditures: Rolling stock (millions) | Gross capital expenditures: Other facilities (millions) | Gross capital expenditures: Total (millions) | Purchases of fuel, material and supplies (millions) |
|---|---|---|---|---|
| 1955 | $ 568 | $341 | $ 910 | $1,637 |
| 1956 | 821 | 407 | 1,228 | 1,884 |
| 1957 | 1,008 | 387 | 1,395 | 1,816 |
| 1958 | 480 | 258 | 738 | 1,231 |
| 1959 | 568 | 250 | 818 | 1,430 |
| 1960 | 633 | 286 | 919 | 1,463 |
| 1961 | 427 | 219 | 646 | 1,262 |
| 1962 | 593 | 240 | 833 | 1,311 |
| 1963 | 785 | 259 | 1,044 | 1,401 |
| 1964 | 1,140 | 278 | 1,417 | 1,476 |
| 1965 | 1,304 | 327 | 1,631 | 1,498 |
| 1966 (est.) | 1,552 | 395 | 1,947 | 1,600 |

Note: Capital expenditures of Class I railroads do not include expenditures for railroad equipment made by private car companies and lessors. (See text.)

for intercity motor carriers of property, 15% for intercity motor carriers of passengers, 9% for water carriers and 10% for oil pipelines.

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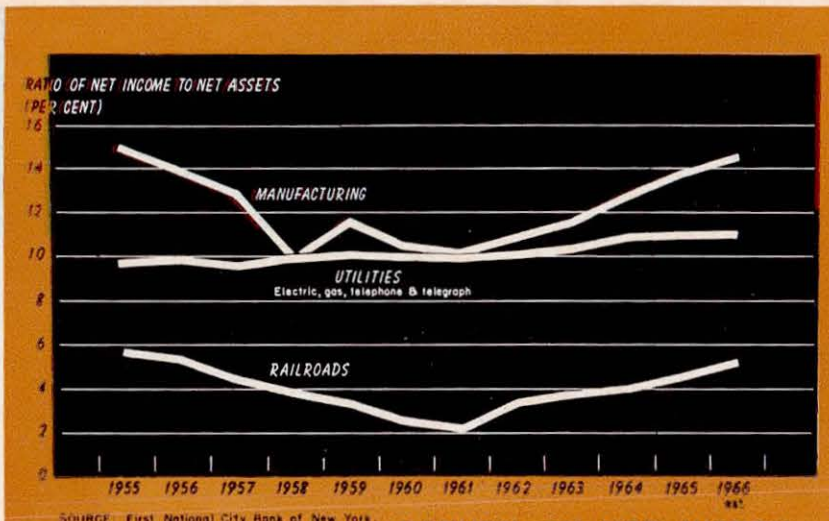
The 6-year decline and 5-year recovery of rail net earnings are set forth in the accompanying Table 1. Data in this and other tables herein are for Class I line-haul railroads unless otherwise noted. It is of interest that between 1956 when railroads last earned a return of about 4% on investment and 1966 when the earnings rate regained that modest level, the aggregate deficiency below a 4% return was $2.8 billion.

An estimated income account for 1966 and analyses of revenues, expenses and taxes, compared with 1965 and 1955, are shown in Tables 2, 3, 4 and 5. Estimated revenues of $10,675 million represent an increase of $467 million over 1965, including a $393-million increase reported by the railroads for the first 9 months and $74 million estimated by the Bureau of Railway Economics to be realized in the last 3 months. Estimated expenses of $8,075 million exceed those of 1965 by $225 million, leaving a $242-million increase in net revenue. After estimated increases of $94 million in taxes and $48 million in rents, the remaining increase carried through to net railway operating income approximates $100 million, resulting in a total NROI of $1,062 million, and a rate of return of 3.97% on an investment of about $26,750 million. After taking into account a $35-million increase in income from other sources and deducting a $25-million increase in interest and other charges, net income shows a $110-million increase to about $925 million.

The estimated increases of $100 million in net railway operating income and $110 million in net income in 1966 over 1965 reflect an expectation that fourth-quarter earnings were somewhat less in 1966 than in the corresponding quarter of 1965. The decrease in estimated fourth-quarter earnings, despite greater freight traffic and revenues, is explained by higher levels of wages, payroll taxes, and material prices in 1966 and by the inclusion in the comparable 1965 quarter of rev-




SOURCE: First National City Bank of New York.

RETURN ON NET WORTH - LEADING CORPORATIONS
1955 - 1966

## Table 1: Rate of Return and Net Income—1955-1966

| Year | Net Railway operating income (millions) | Rate of return on investment after depreciation | Net income after fixed charges (millions) |
|---|---|---|---|
| 1955 | $1,128 | 4.22% | $927 |
| 1956 | 1,068 | 3.95 | 876 |
| 1957 | 922 | 3.36 | 737 |
| 1958 | 762 | 2.76 | 602 |
| 1959 | 748 | 2.72 | 578 |
| 1960 | 584 | 2.13 | 445 |
| 1961 | 538 | 1.97 | 382 |
| 1962 | 726 | 2.74 | 571 |
| 1963 | 806 | 3.12 | 652 |
| 1964 | 818 | 3.16 | 698 |
| 1965 | 962 | 3.69 | 815 |
| 1966 (est.) | 1062 | 3.97 | 925 |

Note: Statistics are for Class I line-haul railroads unless otherwise noted.

## Table 2: Condensed Income Account—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1965 (est.) (millions) |
|---|---|---|---|
| Total operating revenues | $10,106 | $10,208 | $10,675 |
| Total operating expenses | 7,646 | 7,850 | 8,075 |
| Taxes | 1,080 | 916 | 1,010 |
| Rents (net debit) | 252 | 480 | 528 |
| Total expenses, rents and taxes, excl. Fed. inc. taxes | 8,564 | 9,082 | 9,388 |
| Ratio to revenues | 84.7% | 89.0% | 87.9% |
| Net railway operating income | $1,128 | $962 | $1,062 |
| Net income | 927 | 815 | 925 |

## Table 3: Operating Revenues—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Freight | $8,538 | $8,836 | $9,300 |
| Passenger | 743 | 553 | 545 |
| Mail | 287 | 311 | 302 |
| Express | 118 | 76 | 68 |
| All Other | 420 | 431 | 460 |
| Total | 10,106 | 10,208 | 10,675 |

enues accrued in the first 9 months but held in suspense pending settlement of a dispute over divisions of interline revenues.

Particular attention is called to the fact that the ratio shown in Table 2 differs from the traditional "operating ratio" of expenses to revenues and includes operating rents and taxes, excluding federal income taxes. Such rents and taxes are operating costs which should not be overlooked. The greater significance of the more comprehensive ratio is well illustrated by the fact that for 1966 it is 3.2 points higher than for 1955 whereas the 1966 "operating ratio" based on expenses alone would be slightly lower than the 1955 ratio.

Freight revenue, as shown in Table 3, accounted for 87.1% of total revenues, compared with 86.6% a year earlier and 84.5% in 1955. The estimated total of $9.3 billion represents a new high, topping the earlier record (in 1956) by nearly 4%.

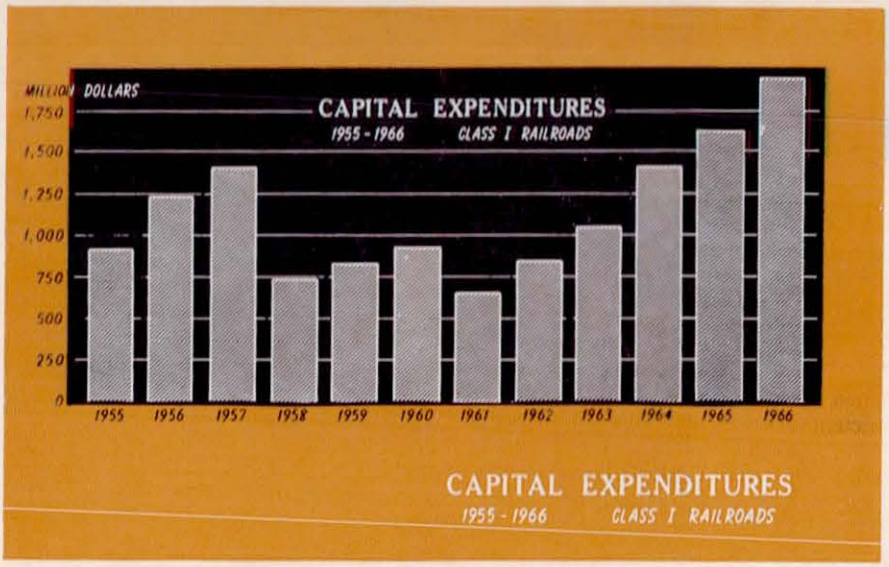
Passenger revenue, estimated at $545 million, included some $15 million added in July and early August when five major airlines were shut down by a strike. In contrast to the decreases registered in the first, second and fourth quarters, third-quarter passenger revenue was up nearly 6% over the corresponding quarter of 1965, and revenue from first class service was up 13%.

Both mail and express revenue declined from the previous year, but mail revenue showed an increase over the 1955 total.

Distribution of 1966 operating expenses among the principal groups of accounts (Table 4) showed little change from 1965. However, compared with 1955, a smaller portion of expenses went for maintenance, reflecting more efficient methods, and a larger share for transportation.

Tax accruals, shown in Table 5, were slightly over $1 billion in 1966, up from $916 million in 1965 but less than 1955's total of $1,080 million. Payroll taxes increased to $440 million in 1966, reflecting (1) an increase in maximum taxable compensation for retirement from $450 to $550 per month per employee, (2) addition of the "Medicare" tax on the same base, and (3) addition of a two-cent-per-hour tax effective Nov. 1, 1966, to support a new company-financed supplemental annuity plan for long-service employees (see "Legislative Activity"). Scheduled increases in tax rates for retirement and "Medicare" plus a full-year cost of the supplemental annuity plan will add about $50 million more to payroll taxes of Class I roads in 1967.

The estimated increase in federal income tax accruals to $225 million in 1966 from $164 million in 1965 is mainly a result of increased taxable earnings. The reduction in "all other" taxes to $345 million from $357 million in 1965 apparently reflects some




## Table 4: Operating Expenses—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Maintenance of way | $1,387 | $1,236 | $1,299 |
| Maintenance of equipment | 1,788 | 1,775 | 1,839 |
| Transportation | 3,770 | 4,020 | 4,110 |
| Traffic, general and other | 701 | 819 | 827 |
| Total | 7,646 | 7,850 | 8,075 |

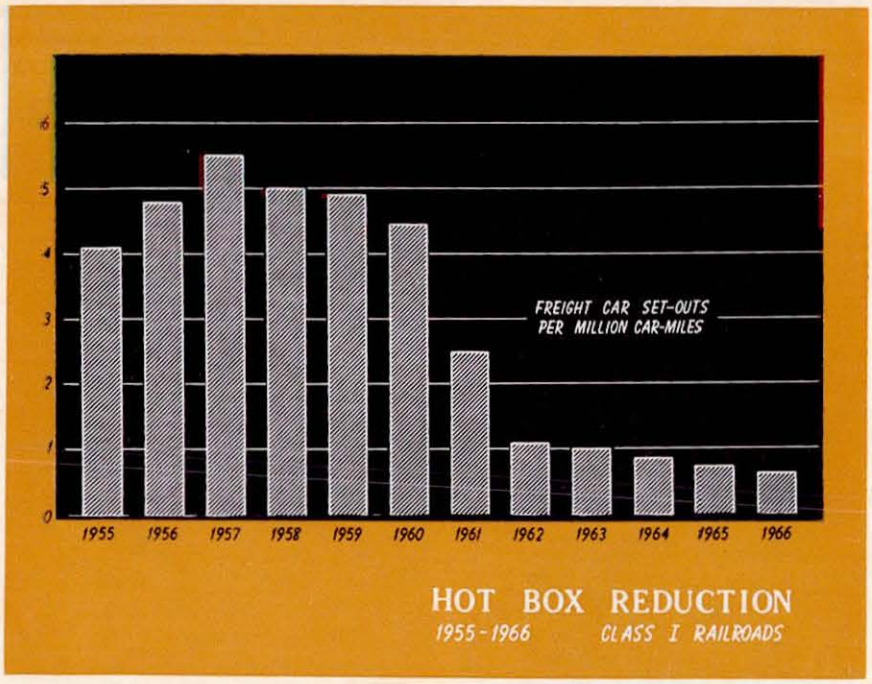
## Table 5: Railway Tax Accruals—1955, 1965 and 1966

| | 1955 (millions) | 1965 (millions) | 1966 (est.) (millions) |
|---|---|---|---|
| Payroll taxes | $ 284 | $ 395 | $ 440 |
| Federal income taxes | 414 | 164 | 225 |
| All other taxes | 382 | 357 | 345 |
| Total taxes | 1,080 | 916 | 1,010 |

## Table 6: Capital Expenditures and Purchases—1955-1966

| Year | Gross capital expenditures: Rolling stock (millions) | Gross capital expenditures: Other facilities (millions) | Gross capital expenditures: Total (millions) | Purchases of fuel, material and supplies (millions) |
|---|---|---|---|---|
| 1955 | $ 568 | $341 | $ 910 | $1,637 |
| 1956 | 821 | 407 | 1,228 | 1,884 |
| 1957 | 1,008 | 387 | 1,395 | 1,816 |
| 1958 | 480 | 258 | 738 | 1,231 |
| 1959 | 568 | 250 | 818 | 1,430 |
| 1960 | 633 | 286 | 919 | 1,463 |
| 1961 | 427 | 219 | 646 | 1,262 |
| 1962 | 593 | 240 | 833 | 1,311 |
| 1963 | 785 | 259 | 1,044 | 1,401 |
| 1964 | 1,140 | 278 | 1,417 | 1,476 |
| 1965 | 1,304 | 327 | 1,631 | 1,498 |
| 1966 (est.) | 1,552 | 395 | 1,947 | 1,600 |

Note: Capital expenditures of Class I railroads do not include expenditures for railroad equipment made by private car companies and lessors. (See text.)




progress in adjustment of excessive property taxes at the state and local levels.

## Capital expenditures

The railroad industry, whose capital improvement programs have played a vital part in enabling it to provide anti-inflationary freight rate reductions in recent years, was jolted in October by enactment at the President's request of a temporary suspension until the end of 1967 of the 7% investment tax credit. The declared purpose was to help contain inflationary forces by discouraging business capital spending. Efforts to exempt railroad equipment from the suspension were rejected. A few months before, however, there was enacted a per diem bill which was cited as a measure to stimulate increased freight-car buying.

Owing to a substantial backlog of equipment on order prior to the beginning of the suspension period on Oct. 10, and therefore eligible for the tax credit, the effect of the suspension will not be reflected immediately in railroad capital outlays. First effects will appear in statistics of new orders and the impact on expenditures will be largely deferred to the last half of 1967 and to 1968. As noted herein under "Equipment Trends," new freight car orders declined in November 1966, the first full month after suspension.

Capital spending by Class I railroads in 1966 according to latest estimates will reach $1,947 million, an increase of more than $300 million over the record total of $1,631 million spent in 1965. Equipment spending is set at $1,552 million or 80% of the total, with $395 million going for other improvements such as signal and communications systems, track betterments, roadway maintenance machinery, bridge strengthening, tunnel raising or widening and yard modernization.

It should be noted that customary statistics of railroad capital expenditures represent charges to the investment accounts of Class I railroads, and thus do not include substantial outlays made for railroad rolling stock by private car owners, such as the Trailer Train Company, the railroad-owned and controlled refrigerator car lines, other private car lines and shipper-owners. Neither do they include the cost of cars and locomotives acquired under leasing arrangements. The magnitude of these expenditures has grown in recent years from about $200 million in 1963 to more than $300 million in 1964, over $400 million in 1965, and $500 million or more in 1966. Thus, total spending for new and rebuilt railroad cars and locomotives and betterments applied to existing equipment amounted to more than $2 billion in 1966. The total outlay for all kinds of improvements was close to $2.5 billion.

While the first quarter of 1967 may show some increase in capital investment over the same quarter of 1966, the outlook for the remainder of the year is less promising. Several railroads have announced planned reductions, citing the unusually high level of such spending in recent years, the improved freight-car supply, and high interest rates, as well as the determination of the government to curtail investment spending by suspension of the investment tax credit. In general, it is indicated that railroads will strive, subject to limited financial resources, to maintain a level of spending high enough to prevent any material worsening of the freight car situation and to avoid a serious loss of momentum in progressing modernization programs. However, to support the high 1965-66 levels of capital investment without a substantial improvement in the level of net earnings would require further increases in debt, liquidation of disposable assets and, perhaps, some decrease of working capital. These sources of capital funds are limited. In the circumstances, loss of the investment credit not only removes an incentive for improvement spending but also aggravates deficiencies of capital funds that otherwise exist.

In the area of purchases of fuel and other material and supplies used in operations and maintenance, it is estimated that the railroads will spend $1.6 billion, an increase of about 7% over the 1965 total of $1,498 million. The estimated increase is based upon a higher level of operations in 1966, together with an increase in prices.

## Progress in technology

Programs of research and development continue to improve railroad equipment and track structures. Freight cars with various advanced features to meet specialized shipper requirements are always being added to the fleet.

Studies of freight car components aim to improve the freight car as a unit, since failure of a vital car detail may result in failure of the whole car. One successful phase of these studies has involved the development of higher-capacity draft gears. As a result, draft gears for new cars having a capacity of 222,000 lb. or over will be required to have an energy absorption minimum of 36,000 ft lb after Jan. 1, 1968. This is double the former requirement. Wrought steel wheels have been improved and two new designs of cast steel wheels are now in general use. The performance of steel wheels is so superior that use of cast iron wheels in interchange is being phased out. Interchange Rule 3 now provides that all freight cars in interchange must be equipped with either cast or wrought steel wheels after Jan. 1, 1968.

In the continuing work on hot box prevention, the 1965 figure of .72 hotbox set-outs per million car-miles was reduced in 1966 to .59 hotbox set-outs per million car-miles, or a further reduction of 18%. With approximately one-fifth of the freight car fleet now equipped with roller bearings and applications of improved plain bearings also continuing, further reductions in the hotbox rate should be seen.

## REVIEW OF 1966 RAILWAY OPERATIONS

Freight car advances include a new-type hopper car for unit-train operation having door openings equal to 37% of the open top, capable of dumping 100 tons of coal in six seconds and a 100-car train in 15 minutes.

The Northeast Corridor project has developed new interest in passenger-car design. Technical activity in the passenger-car field has been directed principally to high speed mainline and new suburban equipment. A new type of turbine-driven high-speed car is now under test. A prototype car body constructed of welded aluminum sheets and extruded shapes was tested for structural strength at the AAR Research Center and exceeded all AAR requirements by a wide margin.

Substantial progress has been made by the Department of Commerce in the test program for operation of four instrumented cars on a test track at speeds of approximately 150 mph. One railroad made test runs with a jet-propelled rail car attaining a top speed of 184 mph, the highest speed ever made in the United States with railroad equipment.

A road test was conducted by the AAR Research Department on an automobile car ferry using a regular bi-level auto rack flat car with no change in trucks. Instrumented dummies to simulate persons in the automobiles indicated that certain refinements would be needed in the car truck if a satisfactory passenger ride were to be obtained.

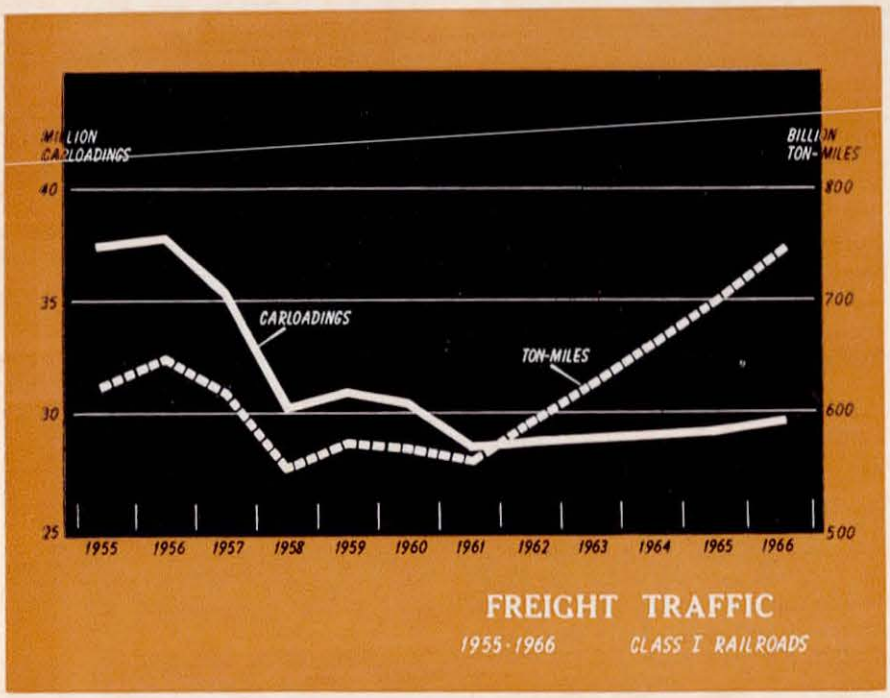
An eastern road operated a 31,726-ton train, composed of 300 loaded cars and a caboose, powered by eight diesel units. Three of the locomotive units were at the head end; the other five were placed in the middle and operated by radio control.

A major part of the new rail now laid is continuous welded rail. A total of 2,356 track-miles of continuous welded new and relay rail were placed in track in 1965, and a somewhat larger mileage in 1966, making a total of approximately 16,500 miles or 7.2% of the mainline trackage in the United States laid with this rail. Improvements made in thermite welds have led to substantially greater use of these welds for connecting long strings of rail and replacing defective rails that are continuously welded. Laying of continuous welded rail at a mean temperature (about 60°-80°F.) has always been a problem. When it is necessary to lay rail at temperatures below the mean, machines are now available for heating a long string of continuous welded rail after it is laid in track and ready for anchoring.

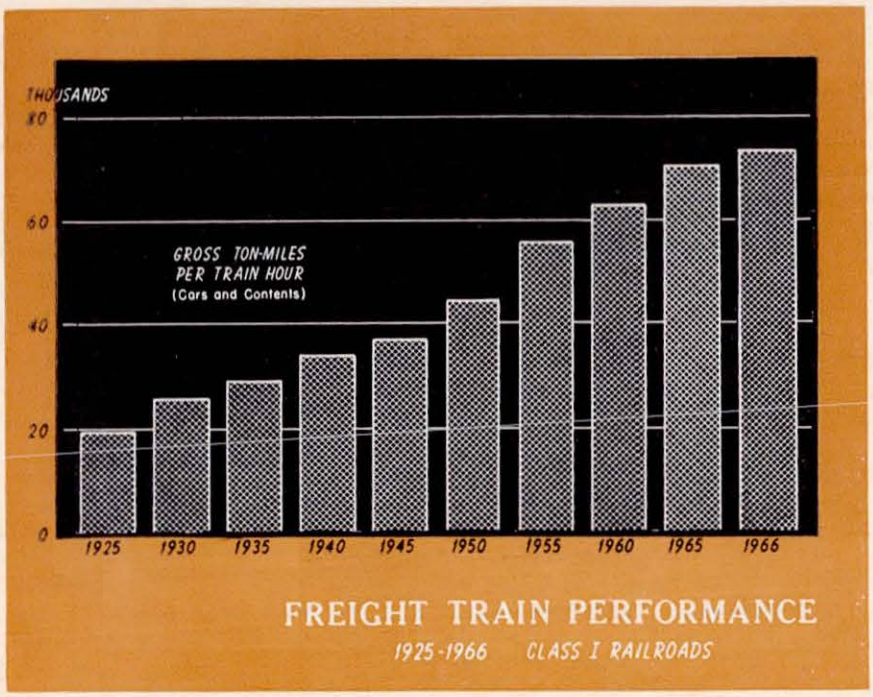
New developments in insulated rail joints include fibre-glass-reinforced plastic joints and use of epoxy resins to glue the rail and insulated joint assembly together so it will have more capability to withstand the high tensile forces that develop in very cold weather.

Indicated shortages of treated wood ties, as well as other factors, have increased interest in prestressed concrete ties. Experimental installations have been made of designs other than the AAR design, which was first placed in track in 1960. A revised AAR design of prestressed concrete ties and fastenings also has been developed.

Developments in mechanized track maintenance equipment include a tie distributor car to pick up bundles of ties along the track, separate them and place them in the desired location for insertion, a new machine for injecting or pushing ties under the rails into the desired position without manual handling, and a new production tie tamper, operating on rubber pneumatic tires, with which a single operator can raise, tamp and line track in one operation. Another machine will tamp two ties simultaneously, almost doubling the tamping speed. A new machine now




FREIGHT TRAFFIC
1955-1966 CLASS I RAILROADS




FREIGHT TRAIN PERFORMANCE
1925-1966 CLASS I RAILROADS

## Table 7: Freight and Passenger Traffic—1955-1966

| Year | Revenue carloadings (thousands) | Piggyback carloadings (thousands) | Revenue ton-miles (millions) | Revenue passenger-miles (millions) |
|---|---|---|---|---|
| 1955 | 37,636 | 168 | 623,615 | 28,526 |
| 1956 | 37,845 | 208 | 647,077 | 28,185 |
| 1957 | 35,500 | 249 | 618,194 | 25,884 |
| 1958 | 30,222 | 278 | 551,667 | 23,269 |
| 1959 | 31,015 | 417 | 575,529 | 22,047 |
| 1960 | 30,441 | 554 | 572,309 | 21,258 |
| 1961 | 28,590 | 591 | 563,361 | 20,283 |
| 1962 | 28,722 | 706 | 592,862 | 19,902 |
| 1963 | 28,871 | 797 | 621,737 | 18,494 |
| 1964 | 29,027 | 891 | 658,639 | 18,245 |
| 1965 | 29,248 | 1,034 | 697,878 | 17,378 |
| 1966 | 29,618 | 1,163 | e744,000 | e17,165 |

e—Estimated

## Table 8: Carloadings by Commodity Groups—1966 vs. 1965

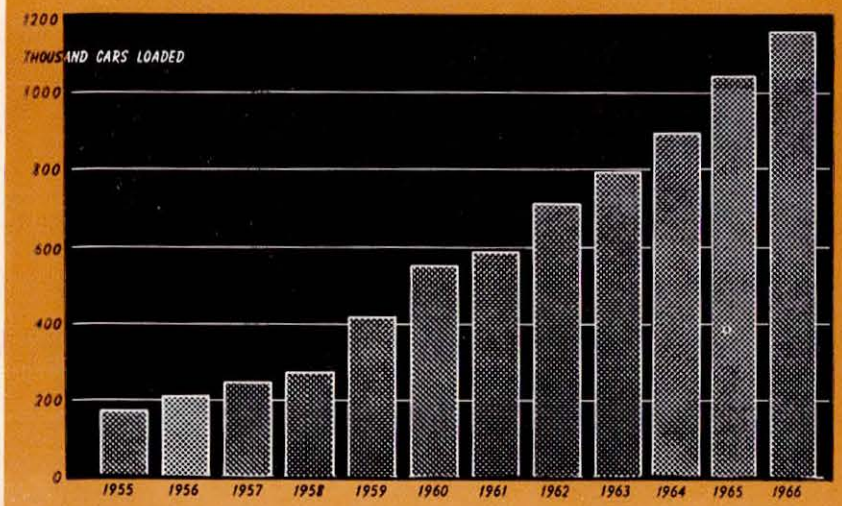
| | Carloadings in 1966 (thousands) | Per cent of total | Increase over 1965 Carloadings (thousands) | Per cent |
|---|---|---|---|---|
| Miscellaneous | 16,159 | 54.6 | 75 | 0.5 |
| Coal | 5,590 | 18.9 | 35 | 0.6 |
| Grain and products | 2,877 | 9.7 | 215 | 8.1 |
| Ore | 2,131 | 7.2 | 175 | 8.9 |
| Forest products | 1,996 | 6.7 | 18 | 0.9 |
| Coke | 432 | 1.4 | 4 | 1.0 |
| Livestock | 110 | 0.4 | d15 | d11.9 |
| Total carloads | 29,296 | 98.9 | 507 | 1.8 |
| Merchandise, LCL | 322 | 1.1 | d137 | d29.8 |
| Total carloadings | 29,618 | 100.0 | 370 | 1.3 |
| TOFC (piggyback) included above | 1,163 | 3.9 | 128 | 12.4 |

d—Decrease

available will tighten six bolts of a track joint simultaneously and cold bend the bars to remove joint droop.

In the structural field, probably the most significant development has been in the increasing use of prestressed concrete box girders which are joined together with epoxy cement to form a continuous floor for a ballast deck structure. Another promising development for steel bridges is a zinc-rich paint with an epoxy resin vehicle which inhibits corrosion.

Computer applications continue to spread, both in terms of the number of companies employing these modern tools of data management and the variety of their uses in the railroad industry. Computer systems are being applied in virtually all areas of management including accounting, operations, engineering, research, marketing, and materials control, and are making significant contributions to the industry's advancing efficiency. Major projects in computer technology also made further progress in 1966.




REVENUE CARLOADINGS OF T-O-F-C TRAFFIC

1955-1966 CLASS I RAILROADS

## Traffic trends

Railroad freight traffic increased in 1966 for the fifth successive year, reflecting railroad participation in the nation's continued economic growth and topping the previous record freight traffic volume of war year 1944. Passenger traffic declined, but an increase in commutation passengers and a surge of long haul travel during the summer's airline strike served to moderate the over-all reduction.

Freight traffic statistics shown in Table 7 continue to reveal the marked trend toward heavier loads in larger cars and a somewhat longer average haul. Revenue carloadings in 1966 rose by only 1.3% over those of 1965 to a total of 29,617,728, while revenue ton-miles which incorporate both weight and distance increased by nearly 7% to an estimated total of 744 billion. Since the low of 1961, carloadings have increased but slightly, while ton-miles are up nearly one-third.

Since 1944 when the earlier record of 737 billion revenue ton-miles was established, the average number of ton-miles produced per car of revenue freight loaded by Class I railroads has increased by nearly one-half, from 16,984 in 1944 to more than 25,000 in 1966. The increase is attributable almost entirely to a heavier average load per car, the average haul being about the same in both years. A decline in LCL traffic from one-eighth of total carloadings in 1944 to barely 1% in 1966 contributed to the increase in average load.

As shown in Table 8, the principal increases in carloadings among identifiable commodities occurred in the grain and ore categories, up 8.1% and 8.9%, respectively, over 1965. The other major commodity groups, coal and forest products, and the catch-all miscellaneous group which accounted for 55% of total carloadings, increased by less than 1%. Coke loadings were up 1%, while livestock loadings were down 12% and LCL loadings were again off nearly 30%.

Piggyback loadings continued to outrun the pace of freight traffic generally, advancing to a total in revenue service of 1,162,731 cars, up 12.4% over the 1965 total of 1,034,377 and nearly double the 591,246 loaded five years earlier. The 1,162,731 cars carried 1,914,000 trailers or containers, up 15% from the 1965 total of 1,669,881,

and more than double 1961's total of 902,260. Thus, the average number of trailers or containers per load increased to 1.65 from 1.53 five years ago.

The total rail movement in piggyback service in 1966, including nonrevenue handling of empty trailers, amounted to 2,685,000 trailers or containers, an 18% increase over the 1965 total of 2,279,796 and two and one-fourth times the 1961 total of 1,182,620 highway units.

Loading of new motor vehicles on multilevel rack cars increased again in 1966, despite a reduction in total factory shipments. Statistics of the Automobile Manufacturers Association are expected to show that railroads handled about 4,600,000 new automobiles and trucks in 1966, or 45% of total shipments by all modes of transportation, up from 4,445,000 or 40.2% in 1965.

Railroad passenger traffic, benefiting from the side-effects of a six-week strike of five major airlines in July and August, showed one of the smallest of the 15 consecutive year-to-year declines experienced since 1951. An increase of about 1.5% in commutation passenger-miles, which at 4.2 billion now account for nearly one-fourth of the rail total, also helped to stem the over-all decline. Indications are that other coach travel was down about 2% to 10.9 billion, while parlor and sleeping car passenger-miles totaled 2.1 billion, down 4%. The over-all decline was between 1% and 2%.

## Rates and fares

Rate adjustments during 1966 continued to reflect greater efficiency resulting from technological and operating advances, heavier loading in larger and improved freight cars, and more penetrating market research and cost studies.

Applications of the unit-train concept progressed further in 1966 as increasing tonnages of coal, ore, grain and other bulk commodities were hauled at greatly reduced rates. Fast movement as a solid block of cars without need for intermediate switching and other costly and time-consuming operations, and with provision for quick unloading and return of cars, has made possible the low rates that have popularized unit-train operations. In some instances, however, rising costs induced by inflationary forces now operative in the economy have necessitated upward adjustments in unit-train rates.

On March 29, 1966, the initial unit-train movement of alumina—the powdery white oxide of aluminum from which metallic aluminum is produced—moved in 50 aluminum covered hoppers from the Alcoa bauxite refinery at Mobile, Ala., on a 1,700-mile trip to the smelter at Massena, N. Y. This is another example of what can be done when shipper and carrier join efforts to expedite freight movements at lower unit cost. Also, the operation of what is stated to be the country's first unit-coal train of shipper-owned aluminum cars between three new mines in southeastern Ohio and Midland, Mich., was inaugurated in the fall of 1966. It is estimated that the rate reduction on this movement of coal will be approximately $1 a ton, for an annual transportation saving of approximately $1 million.

Another major unit-train operation was initiated in 1966 to move coal in specially-designed gondolas 1,100 miles from York Canyon in New Mexico to a steel plant at Fontana, Calif. To make this movement possible a 37.5-mile segment of railroad was constructed from the mine to the main rail line at French, N. M. The train is scheduled to cover 541 miles per day and to deliver 8,400 tons of coal to the steel plant every four days.

Through their rate associations, the rail carriers gave consideration to numerous proposals involving territory-wide revisions in rates during the year. The general aim was to provide rate adjustments that would encourage loading of available equipment to capacity and thus improve the efficiency and competitive position of the railroads. Such adjustments which were approved and made effective in 1966 included:

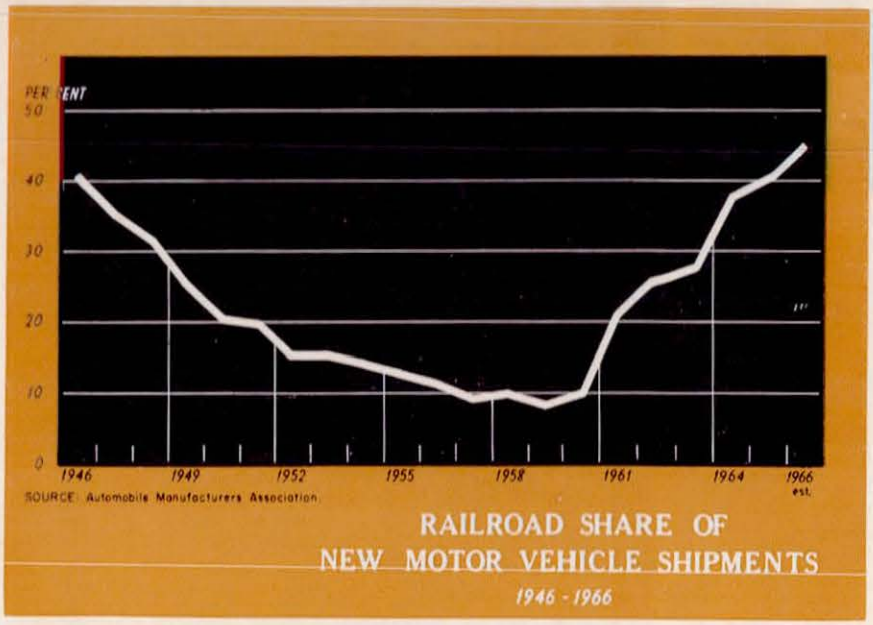
—Multiple car and cut-back rates on grain, from Southwestern and Western Trunk Line origins, to Gulf ports for export;

—Application of rates on plastics, other than liquid, at 160,000 pounds in bulk in covered hopper cars based on 82 1/2% of present 100,000 scale, within Southwestern, also between Southwestern on the one hand and stations in Illinois Freight Association, Western Trunk Line, Southern Freight Association, and Official territories on the other;

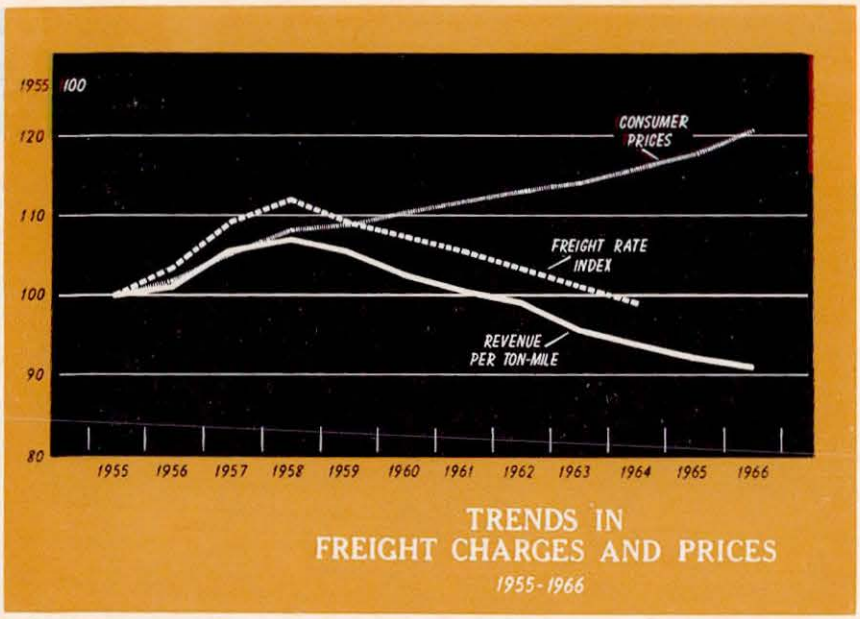
—Reduced rates on gypsum wallboard and products subject to minimum weight of 80,000 pounds in box cars, and 90,000 pounds on bulkhead flat cars, subject to unloading allowance of 5 cents cwt;

—Commodity rate scales established on vegetable oils in tank cars subject to minimum weight of 150,000 pounds within and from Southwestern territory. Rates were related to present 60,000-pound rates, the purpose being to encourage effective use of 20,000-gallon tank cars;

—100,000-pound incentive rates published on oleomargarine, not frozen, within Western Trunk Line territory, between Western Trunk Line and Official territories and between Western Trunk Line on the one hand and Southwestern Freight Bureau and Southern Freight Association territories on the other;




# Increasing tonnages of various




TRENDS IN FREIGHT CHARGES AND PRICES 1955-1966

# commodities moved in unit trains

—Annual volume rates on canned vegetables and mushrooms of not less than 30,000 tons published from various Illinois, Minnesota and Wisconsin origins to Tucker, Georgia;

—A new reduced general level of incentive loading rates established on rubber tires to apply on shipments weighing in excess of 30,000 pounds loaded in the same car. This publication was made to accommodate a new loading method developed by the industry whereby tires are compressed, banded with steel strapping and loaded in cars via mechanical methods; and

—Incentive rates subject to a minimum weight of 100,000 pounds that reflect 70% of the existing 40,000-pound rates established on boards, building, wall, or insulating, within Western Trunk Line territory and between Western Trunk Line territory on the one hand and Southwestern Freight Bureau, Southern Freight Association, and Official territories on the other.

A decision last year by the full Commission in *Ingot Molds, From Pennsylvania to Steelton, Kentucky*, (326 ICC 77) rejected a proposed rail rate because it was found that a barge-truck operation had lower costs based on "fully-distributed cost" calculations. The Louisville & Nashville and Pennsylvania Railroads, joined by forty-eight other intervening railroads, appealed to a U.S. District Court in Louisville, Ky. The Department of Justice on behalf of the United States, having confessed error in its answer to the railroads' complaint, also has filed a brief opposing the Commission's order as invalid.

In 1965 the Commission in Docket No. 33171 (322 ICC 743) vacated its orders requiring observance of the rate-break rule on grain shipments which had been in effect for over 30 years. However, a U.S. District Court found that the ICC had failed to notify the affected railroads that it had such a step under consideration, and remanded the proceeding for further consideration while blocking effectiveness of the Commission's order. This decision was upheld by the U.S. Supreme Court on Jan. 24, 1966. The Commission thereupon incorporated the record in Docket No. 33171 with Docket No. 17000, Rate Structure Investigation, Part 7, Grain and Grain Products Within the Western District and for Export, and reopened the latter proceeding to consider the advisability of continuing the rate-break rule in effect. This proceeding, which embraces I&S Docket No. 8307, Transit Provisions on Wheat at Twin Cities, Minnesota, has been assigned for hearing on Feb. 1, 1967.

On May 9, the Commission made public two decisions, on a 6-to-5 vote, that certain rail-truck and truck-rail-truck rates come under the long and short haul provisions of the Interstate Commerce Act. One decision (Docket No. 34254) involved Plan II and Plan V TOFC rates and the second decision (Docket No. 34238) involved a complaint by barge operators that they were discriminated against by the failure of railroads and motor common carriers to establish certain ex-barge rates at the same level as divisions received under joint rail-motor rates. The Commission held that although Section 4 does not apply to charges of motor carriers acting alone, it does apply to joint rail-motor or motor-rail-motor rates. By order issued Nov. 25, the Commission denied petitions for reconsideration and directed that the decision become effective Jan. 31, 1967.

The ICC on Nov. 10 in I&S Docket No. 8125 (329 ICC 281) approved reduced railroad commodity rates on paper and paper products from midwest origins to the port of Baltimore but disapproved similar rates to other North Atlantic ports. The majority opinion declined to regard the question of port equalization as determinative of the lawfulness of rail rates, rejecting "any principle of absolute equalization between ports" and calling the approved rates "a step in restoring healthy carrier competition."

A proposal to add 5% to the charges for carload shipments not loaded to full visible or marked capacity of a car, aimed at encouraging more efficient utilization of freight cars, was the subject of a public hearing in Chicago on Dec. 5-6.

● **Passenger fares.** Although there have been no general changes in the basic passenger fares during 1966, several Western and Southern railroads increased their one-way and station-to-station roundtrip first class and coach fares by 10%. There were no significant adjustments in commutation fares.

Many Western railroads again established 30-day round-trip first class and coach class special excursion fares during the off-peak period between Sept. 15 and May 15.

● **Express rates.** A Federal Court in Boston affirmed the Commission's decision dated Nov. 12, 1964, in Docket No. 33977 (323 ICC 468) that approved container rates which had become effective Jan. 12, 1962, but were investigated by the Commission. The American Trucking Associations, Inc., et al., appealed the Court's decision to the Supreme Court of the United States On Dec 5, the Supreme Court approved these container rates, thus writing the final chapter to a case that had been under attack before the ICC and in the courts for over five years.

In the early part of the year REA Express completed its upward adjustment in all rates and charges which was started in 1965. Rather than publish uniform across-the-board increases, which had been the practice in the past, the amount of these adjustments varied

as between classes of traffic. The overall average increase amounted to slightly over 3%.

## Employment and wages

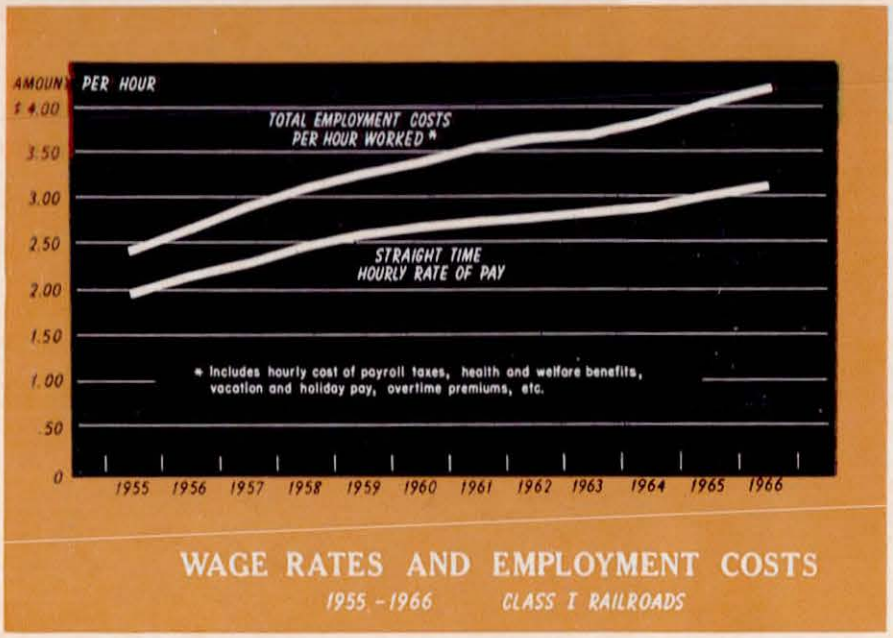
Railroad employment averaged approximately 631,000 during 1966, about 9,000 or 1.5% below the 1965 average. Employment thus continued downward but at a slower pace than in other recent years, as shown in Table 9. Total wages increased to an estimated $4,870 million, about $77 million above 1965, as the result of increases in wage rates which became effective during 1966. Aggregate labor costs including payroll taxes and health and welfare benefits amounted to about $5,510 million, up $141 million over 1965.

Annual wages per employee averaged about $7,720, an increase of $230. Wage supplements amounted to slightly more than $1,000 per employee. The average straight time rate of pay was $3.09 per hour and straight time hourly earnings (straight time pay per straight time hour worked) averaged $3.32.

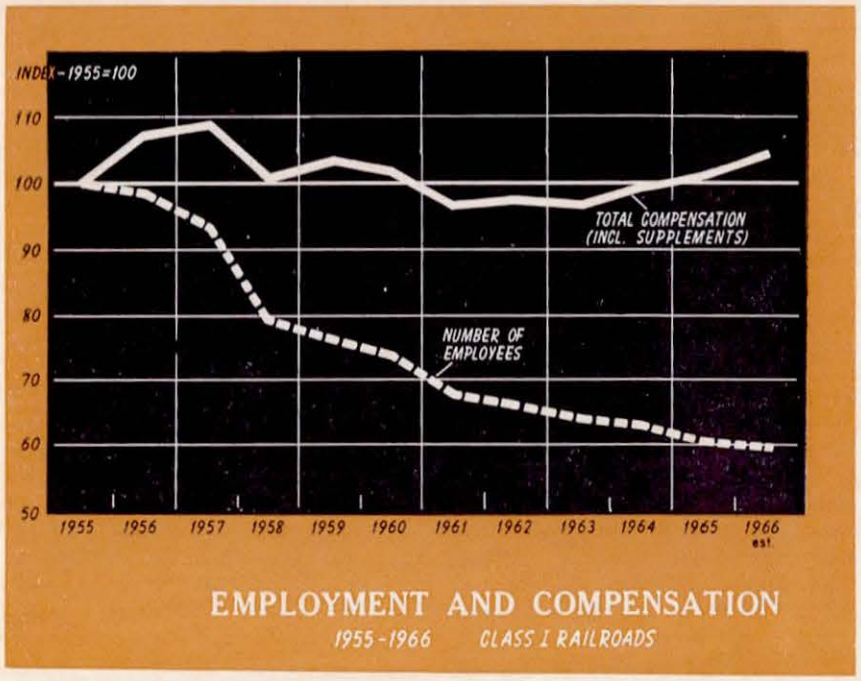
Wage supplements to provide hospital, medical and surgical benefits for employees and their dependents and life insurance for employees amounted to approximately $200 million in 1966. Payroll taxes to provide retirement unemployment and sickness benefits administered by the Railroad Retirement Board came to about $440 million. These supplements, added to total wages which include overtime premium pay, vacation and holiday pay, and the effect of mileage pay in train and engine service, resulted in an average employment cost of about $4.23 per hour actually worked.

Under the terms of agreements made in 1964, most non-operating employees received an increase of 9 cents per hour effective Jan. 1, 1966. Electricians, machinists and sheet-metal workers received an increase of 3.5% in rates of pay for journeymen while rates for regular apprentices in those crafts were raised 6 cents per hour.

Moratorium provisions in the 1964 agreements with organizations representing essentially all railroad employees expired during 1966. As a result proposals were made seeking increases in rates of pay and improvements in a wide variety of fringe benefits for all employees represented by union organizations. Wage increase proposals ranged from 18% to 33 1/3% in basic rates, plus annual improvement factor increases, cost-of-living escalator provisions, shift differentials and higher overtime premium pay. The Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen & Enginemen proposed a reduction in the basic day generally from 8 hours to 6 hours without reduction in rates of pay, and the Engineers proposed an increase of 25% in basic rates when an engineer is the only member of the engine crew.


AMOUNT PER HOUR
$ 4.00
3.50
3.00
2.50
2.00
1.50
1.00
.50
0
TOTAL EMPLOYMENT COSTS PER HOUR WORKED *
STRAIGHT TIME HOURLY RATE OF PAY
* Includes hourly cost of payroll taxes, health and welfare benefits, vacation and holiday pay, overtime premiums, etc.
1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966

WAGE RATES AND EMPLOYMENT COSTS
1955-1966 CLASS I RAILROADS




EMPLOYMENT AND COMPENSATION
1955-1966 CLASS I RAILROADS

Fringe benefit proposals principally sought liberalized vacations, additional holidays, additional life insurance, paid lunch periods, and pay for jury duty and funeral leave.

Agreements in November between the carriers and the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Firemen & Enginemen disposed of the proposals of those organizations. The agreements provided for an increase of 5% in basic rates of pay effective Aug. 12, 1966, and also reduced the requirement for a 3-week vacation effective Jan. 1, 1967, from 15 years to 10 years of continuous service. Rates of pay established by the agreements are to remain in effect until Jan. 1, 1968, although the parties may serve notice of proposed changes on or after Sept. 1, 1967.

In December agreement was reached between the carriers and the Brotherhood of Railway Clerks in settlement of the proposals of that organization. The agreement was similar in all re-

spects to those with the Trainmen and Firemen except that the increase of 5% in rates of pay was made effective on Jan. 1, 1967, in accordance with moratorium provisions in the 1964 agreement.

The pattern established by these 1966 agreements covers approximately one-third of the employees represented by union organizations in the industry. At the close of the year negotiations with other organizations were continuing.

Proposals served on individual railroads requesting the establishment of supplemental (to the Railroad Retirement System) pension programs financed solely by the carriers were pending at the beginning of 1966 or filed during the first part of the year. Negotiations at the national level culminated in an agreement in August 1966, providing that the parties would jointly recommend and support prescribed legislation to establish such supplemental annuities for long-service employees by amending the Railroad Retirement Act. Provisions of the enacted bill are discussed below under "Legislative Activity."

Litigation occurred in 1966 regarding the status of terms and conditions prescribed under Arbitration Award No. 282 after the nominal period of that Award running to Jan. 25, 1966, as to train crewmen and to March 31, 1966, as to firemen. As a result of action brought in the U.S. District Court for the District of Columbia, Judge Alexander Holtzoff ruled that the Arbitration Award created new conditions and that any change in the new status must follow Railway Labor Act procedures. The court's ruling was appealed by the Firemen's union.

On March 31, 1966, the Firemen struck eight major railroads and remained on strike four days despite back-to-work orders issued by the court. A contempt citation and fine levied against the union were also appealed. Other matters pending at year end included action toward damages instituted by the eight struck railroads.

Early in January 1966 a National Joint Board established under Abitration Award No. 282 had concluded that there had been virtually no adverse effects from the removal of firemen from freight and yard diesels.

## Wage rates and prices

As noted heretofore, wage rates and wage supplements of railroad employees have been trending steadily upward and the trend has continued over a long period of years. Prices of railroad material and supplies, on the other hand, have only recently turned upward after a period of seven years of over-all stability during which a moderate rise in prices of materials other than fuel was offset by a concurrent reduction in fuel prices.

As shown in Table 10, the index of wage rates, based on straight time hourly rates in 1957-1959, rose by more than 50% between 1955 and 1965, averaging more than 4% per year, and advanced by 3% in 1966 over 1965, based on statistics which somewhat understate the effect of retroactive increases on the 1966 rate.

Fuel prices were higher in 1957 than in any other year shown, and the trend after 1957 was downward until 1964. Prices of other material and supplies increased gradually in the late 1950's, then held steady in the period 1960-1964, moving in a narrow range of 102.8 to 103.7% of the 1957-59 average. The all-material index (including fuel) in 1964 was exactly 100, indicating a weighted average price the same as the average in 1957-59, and the combined index of wage rates and prices in 1964 was 113.1, indicating an average 2% rise since the base period.

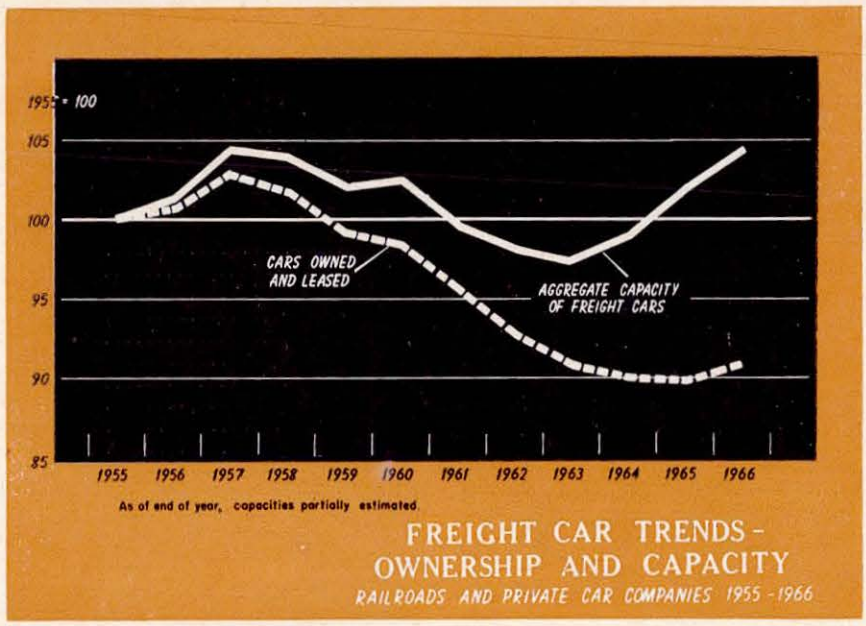
### Table 9: Employees and their Compensation—1955-1966

| Year | Average number of employees | Total payroll (thousands) | Average annual earnings of employees | Average straight time hourly Rate | Average straight time hourly Earnings |
|---|---|---|---|---|---|
| 1955 | 1,058,216 | $4,993,662 | $4,719 | $1.96 | $2.08 |
| 1956 | 1,042,664 | 5,324,672 | 5,107 | 2.13 | 2.25 |
| 1957 | 986,001 | 5,358,044 | 5,434 | 2.28 | 2.42 |
| 1958 | 840,575 | 4,929,906 | 5,865 | 2.46 | 2.61 |
| 1959 | 815,474 | 4,986,253 | 6,115 | 2.56 | 2.72 |
| 1960 | 780,494 | 4,893,558 | 6,270 | 2.62 | 2.80 |
| 1961 | 717,543 | 4,623,982 | 6,444 | 2.69 | 2.87 |
| 1962 | 700,146 | 4,662,065 | 6,659 | 2.75 | 2.95 |
| 1963 | 680,039 | 4,629,566 | 6,808 | 2.78 | 2.99 |
| 1964 | 665,034 | 4,697,884 | 7,064 | 2.85 | 3.06 |
| 1965 | 639,961 | 4,793,066 | 7,490 | 3.00 | 3.22 |
| 1966 (est.) | 631,000 | 4,870,000 | 7,720 | 3.09 | 3.32 |

### Table 10: Index of Wage Rates and Material Prices—1955-1966

(Average 1957-1959=100)

| Year | Wage index (all employees) | Material price index Fuel | Material price index Other material | Material price index Total | Index of wage rates and prices |
|---|---|---|---|---|---|
| 1955 | 80.7 | 91.5 | 87.1 | 88.3 | 82.5 |
| 1956 | 87.4 | 96.8 | 93.1 | 94.0 | 89.0 |
| 1957 | 93.8 | 104.5 | 98.2 | 99.9 | 95.3 |
| 1958 | 101.1 | 96.6 | 99.9 | 99.0 | 100.6 |
| 1959 | 105.1 | 98.8 | 102.0 | 101.2 | 104.1 |
| 1960 | 107.8 | 94.4 | 103.6 | 101.2 | 106.1 |
| 1961 | 110.4 | 96.3 | 103.7 | 101.7 | 108.2 |
| 1962 | 112.9 | 95.5 | 103.1 | 101.0 | 110.2 |
| 1963 | 114.1 | 95.0 | 102.8 | 100.7 | 111.1 |
| 1964 | 117.0 | 89.5 | 103.7 | 100.0 | 113.1 |
| 1965 | 123.2 | 91.7 | 104.5 | 101.1 | 118.2 |
| 1966 (prel.) | 126.9 | 93.2 | 106.3 | 102.8 | 121.4 |


105
100
95
90
85
CARS OWNED AND LEASED
AGGREGATE CAPACITY OF FREIGHT CARS
1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966
As of end of year, capacities partially estimated.
FREIGHT CAR TRENDS - OWNERSHIP AND CAPACITY
RAILROADS AND PRIVATE CAR COMPANIES 1955-1966

Both fuel and other materials have shown subsequent price increases, fuel rising from 89.5 in 1964 to 93.2 in 1966, other material prices going from 103.7 to 106.3, and the all-material index advancing from 100.0 to 102.8. These indexes are computed on a "chargeout basis" taking into account the lag between purchase and use. Therefore, the October spot price index which stood at 104.9 is only partially reflected in the index shown for 1966 and foreshadows a still higher chargeout index of materials to be consumed in 1967.

● **Revenue averages.** In contrast to the recent upward turn in prices of railroad material and supplies and also in the more comprehensive Consumer Price Index of the Bureau of Labor Statistics, the railroads' average freight charge per revenue ton-mile of freight service declined again in 1966, as it has in every year since 1958. That the decline is the result of reductions in freight rates and is not due merely to changes in the composition of railroad traffic is indicated by the ICC's freight rate index, at least for the period 1958 to 1964. During that period the index declined in almost exact parallel to the decline in revenue per ton-mile. The ICC index has not yet been published for 1965 or 1966.

As shown in Table 11, ton-mile revenue in 1966 averaged 1.25 cents, down 1.3% from the previous year and 15% lower than the 1958 average of 1.463 cents. Over the same eight-year span of decreasing rail revenue averages, the index of railroad material prices and wage rates increased by 21%, while the BLS Consumer Price Index was 14% higher at the end of 1966 than in the year 1958.

With average freight charges declining and consumer prices rising, the cost of railroad freight transportation has become a smaller part each year of the total cost of consumer goods.

## Equipment trends

Most significant among the equipment trends in 1966 was an increase in the total freight car fleet. While the increase amounted to little more than 1% in terms of numbers of cars, it reversed an eight-year downtrend and resulted in an easing of car supply difficulties during the fall period of peak carloadings.

As shown in Table 12, the freight car fleet at year-end amounted to approximately 1,817,000 cars, up 20,000 from one year earlier. Following the pattern of other recent years and reflecting preferences of today's shippers,

### Table 11: Freight Rates and Revenue Averages—1955-1966

| Year | ICC freight rate index (1950=100) | Revenue per ton-mile (cents) | Revenue per passenger-mile (cents) |
|---|---|---|---|
| 1955 | 108 | 1.370 | 2.604 |
| 1956 | 112 | 1.384 | 2.684 |
| 1957 | 118 | 1.445 | 2.839 |
| 1958 | 121 | 1.463 | 2.900 |
| 1959 | 118 | 1.445 | 2.951 |
| 1960 | 116 | 1.403 | 3.011 |
| 1961 | 114 | 1.374 | 3.079 |
| 1962 | 112 | 1.348 | 3.110 |
| 1963 | 109 | 1.310 | 3.179 |
| 1964 | 107p. | 1.284 | 3.168 |
| 1965 | n.a. | 1.266 | 3.182 |
| 1966 (est.) | n.a. | 1.250 | 3.200 |

p.—Preliminary

### Table 12: Inventory of Equipment—1955-1966

| December 31 | Freight cars* | Passenger cars (incl. Pullman) | Head-end passenger-train cars | Diesel locomotive units | Other locomotive units |
|---|---|---|---|---|---|
| 1955 | 1,991,726 | 22,479 | 15,118 | 24,899 | 6,605 |
| 1956 | 2,010,604 | 21,164 | 14,472 | 26,190 | 4,287 |
| 1957 | 2,055,274 | 20,105 | 14,114 | 27,320 | 2,956 |
| 1958 | 2,032,676 | 18,577 | 13,767 | 27,715 | 1,872 |
| 1959 | 1,982,110 | 17,459 | 13,208 | 28,238 | 1,288 |
| 1960 | 1,968,771 | 16,181 | 12,818 | 28,369 | 774 |
| 1961 | 1,907,723 | 15,004 | 12,345 | 28,240 | 614 |
| 1962 | 1,852,992 | 14,240 | 11,788 | 28,170 | 505 |
| 1963 | 1,817,026 | 13,732 | 11,369 | 27,969 | 478 |
| 1964 | 1,802,582 | 12,507 | 11,154 | 27,879 | 433 |
| 1965 | 1,796,814 | 11,371 | 10,502 | 27,433 | 399 |
| 1966 (est.) | 1,817,000 | 10,500 | 10,000 | 27,440 | 380 |

*All cars, railroad and private.

### Table 13: New Equipment Installed—1955-1966

| Year | Freight cars (see note) | Passenger-train cars | Diesel-electric locomotives | Other locomotives |
|---|---|---|---|---|
| 1955 | 40,755 | 444 | 1,172 | 10 |
| 1956 | 70,639 | 411 | 1,445 | 8 |
| 1957 | 102,175 | 191 | 1,312 | 4 |
| 1958 | 46,835 | 148 | 430 | 4 |
| 1959 | 46,023 | 74 | 835 | 7 |
| 1960 | 58,322 | 239 | 440 | 13 |
| 1961 | 34,241 | 204 | 242 | 32 |
| 1962 | 39,822 | 285 | 754 | 28 |
| 1963 | 48,255 | 143 | 806 | 13 |
| 1964 | 83,256 | 408 | 1,116 | .. |
| 1965 | 89,637 | 577 | 1,440 | .. |
| 1966 (est.) | 105,000 | 110 | 1,330 | .. |

Note: Cars rebuilt by Class I railroads are counted as new. Freight car installations include cars of all railroads and private car lines.

### Table 14: Casualties in Railroad Accidents—1964-1966

| Category | 1964 | First 5 months 1965 | 1966 | Per cent increase 1966/1964 |
|---|---|---|---|---|
| Employees on duty: | | | | |
| Fatalities | 74 | 71 | 63 | d14.9 |
| Total casualties | 8,078 | 7,599 | 7,296 | d 9.7 |
| Others, except at highway grade crossings: | | | | |
| Fatalities | 244 | 264 | 243 | d 0.4 |
| Total casualties | 1,862 | 1,704 | 1,655 | d11.1 |
| Others, at highway grade crossings: | | | | |
| Fatalities | 648 | 602 | 730 | 12.7 |
| Total casualties | 2,177 | 2,140 | 2,395 | 10.0 |
| Total, all persons: | | | | |
| Fatalities | 966 | 937 | 1,036 | 7.2 |
| Total casualties | 12,117 | 11,443 | 11,346 | d 6.4 |

d—Decrease

there were increases in ownership of covered hopper cars, specially equipped box cars, flat cars for piggyback and other services, refrigerator cars and tank cars, while the number of plain box, gondola and hopper cars declined.

As indicated by a footnote therein, the inventory of freight cars listed in Table 12 includes private cars, which are becoming an increasingly important part of the total fleet, as well as cars of the smaller railroads. The private category includes cars owned by railroads indirectly through such subsidiaries as the Trailer Train Company and the railroad-controlled refrigerator car companies. The number of cars of other than Class I railroad ownership included in the inventory increased from 298,000 or 15% of the total in 1955 to 325,000 or 18% in 1966.

Another trend to be noted particularly is the increasing size of cars. As a result of an increase in average carrying capacity, now 61 tons, the aggregate capacity of today's fleet is almost the same as that of 1957, despite a decline of 238,000 cars in the inventory. With this level capacity, the railroads in 1966 handled freight traffic volume 20% greater than in 1957.

Adequacy of car supply continued to receive attention by the railroad industry, the Commission and the Congress. A statement of principles to serve as a guide to ownership requirements of general purpose cars by individual railroads, developed by a special industry committee, was approved by the AAR board of directors. In general, each road would be responsible for its local traffic and for its share of interline traffic based on car-days of use. The Commission conducted hearings in Ex Parte No 241, an "investigation of adequacy of railroad freight car ownership, car utilization, distribution rules and practices," and received comments on a proposed "incentive per diem rate" in Ex Parte No. 252, following amendment of its car hire rate-fixing powers.

These activities aimed to augment car supply were countered by suspension of the investment tax credit, with its announced purpose to reduce the purchasing of capital goods, including freight cars and locomotives.

Other equipment trends shown in Table 12 include a further decrease in the number of passenger-train cars. The number of passenger-carrying cars at year-end 1966 was about 10,500 and the number of head-end cars was about 10,000, representing 10-year decreases of nearly one-half and one-third, respectively.

There was no appreciable change during 1966 in the number of locomotive units in service, but their aggregate capability increased by substitution of larger and more efficient new units for those retired.

As shown in Table 13, listing new and rebuilt equipment installed, the record capital expenditures of 1966 were chiefly the result of installation of 105,000 freight cars, which at an estimated average of $15,000 each, involved an outlay of nearly $1.6 billion. The number of cars installed makes 1966 one of the great freight-car-building years and the capacity of new and rebuilt cars installed appears to have been the highest in 43 years. Locomotive installations exceeded 1,000 for the third successive year, the estimated 1966 total being 1,330 units, averaging 2,670 horsepower, and costing a total of some $300 million. Passenger-train-car installations in 1966, estimated at 110, consisted largely of flat cars designed to carry Flexi-Van containers in passenger-train service.

Orders for new equipment will be watched with interest in the months ahead. Freight car orders placed by Class I railroads in November, the first calendar month following suspension of the investment credit, fell to 3,498 cars from 6,146 in November 1965, while total new orders including private cars came to 6,251 compared with 8,688 reported one year earlier.

Equipment on order at year-end included about 50,000 freight cars, enough to occupy car-shop capacity for nearly six months at current delivery rates. Equipment manufacturers, as well as shippers and carriers, were manifesting concern about the outlook beyond mid-year 1967.

## Safety improved again

Railroad safety as reflected in ICC statistics of casualties to persons in railroad accidents continued to show improvement in 1966. Such a reduction in casualties in a period of increasing traffic emphasizes the benefits attainable through unremitting attention to safe performance.

Casualty statistics for the first 5 months of 1966, the latest period for which final data are available, are set forth in Table 14 with corresponding data for like periods in 1964 and 1965. As there shown, casualties were fewer in 1966 than in either of the earlier years, although fatalities were higher as the result of an increase at highway-railway grade-crossings. Compared with a 6.4% reduction in total casualties in the 1966 period under 1964 and a 7.2% increase in fatalities, the level of operations as indicated by gross ton-miles was up 8.3%. Thus, the over-all casualty rate per gross ton-mile declined by 13.5%, while the fatality rate on a similar ton-mile basis dropped by 1.0%, despite the worsened record of grade-crossing deaths.

Casualties to employees on duty in the 5-month period in 1966 were down 10% from 1964, including a reduction of 15% in fatalities, and were also down from 1965. Adjusted for a 7% decrease in man-hours worked, the reduction in employee casualties per man-hour was 3%, 1966 under 1964. Adjusted for the 8% increase in the level of operations, the reduction in employee casualties per gross ton-mile was 17%.

Casualties to persons other than employees, excluding highway grade crossing accidents, were reduced by 11% in 1966 under the 1964 period. While the 1966 fatality figure in this category showed but little reduction under 1964, it was 8% under 1965.

The third category shown in Table 14, casualties at highway grade crossings to persons other than railroad employees, is primarily a reflection of motor-vehicle operations. The figures show a considerable worsening in the 1966 period, reversing what had been a favorable trend from 1964 to 1965. Compared with 1964, grade-crossing casualties were up 10%, including an increase of nearly 13% in fatalities, an increase which is of particular concern in view of the industry's otherwise improved safety record. More than twice as many deaths occurred in these primarily highway accidents as in strictly railroad accidents in the 1966 period.

Concurrent with the improvement in railroad safety as noted above, there have been increases in reportable property-damage accidents each year since 1961. These increases apparently reflect in part the steadily rising value of railroad plant and equipment and heavier traffic volumes.

## Legislative activity

President Johnson, in his State of the Union Message, proposed a Department of Transportation, improved highway safety programs and the development of a format for controlling strikes threatening irreparable harm to the nation. In his Budget Message, the President requested new and additional user charges ". . . so that the primary beneficiaries will defray a larger part of the costs incurred by the Federal Government in providing transportation facilities and services to these beneficiaries." He made such specific suggestions as an increased air passenger tax (later

# Highway safety was of particular concern

modified), a tax on air freight, a higher diesel fuel tax on trucks and a weight-graduated use tax on heavy trucks. Congress took no action on user charges. Also proposed was a tax on fuel used by vessels on the inland waterways. The President sent to the Congress a proposal changing the present annual rotation of the Chairmanship of the ICC to a procedure whereby the Chairman would be selected by the President.

● **Department of Transportation.** Following extensive hearings, Public Law 89-670 was passed creating a Department of Transportation to be headed by a Secretary at Cabinet level. The new agency will include Federal Railroad, Aviation and Highway administrations, each with an Administrator appointed by the President, and a five-man National Transportation Safety Board. Among the agencies transferred to the new Department are the Federal Aviation Agency, the Bureau of Public Roads and the St. Lawrence Seaway Development Corporation. The safety functions of the ICC and the Civil Aeronautics Board were also transferred.

The Secretary of Transportation is to develop, subject to Congressional approval, standards and criteria applicable to federal expenditures for transport facilities and equipment, except for certain types of proposed investment. The most notable exception is water resource projects, for which the authority to develop standards and criteria is vested in the Water Resources Council, which is expanded to include the Secretary of Transportation in reference to projects involving navigation. The law also establishes procedures for computing navigation benefits associated with these proposals.

● **Highway legislation.** Safety on the highways was a matter of particular legislative concern. Public Law 89-563 authorized the Secretary of Transportation, through the National Traffic Safety Agency and in cooperation with industry, to set safety standards for all new and used motor vehicles operating in interstate commerce. Public Law 89-564 requires the states to develop a uniform highway safety program subject to approval by the Secretary of Transportation through the National Highway Safety Agency.

Public Law 89-574 increased previous authorizations for the Interstate Highway System by $5.2 billion and extended for one year, through June 1972, the completion date for that program. Another $2 billion was authorized for fiscal 1968 and 1969 to construct primary, secondary and urban roads in the Federal Aid System (A, B, C), and over $500 million was authorized from general revenues for road construction on public lands, parks, forests and Indian reservations. No action was taken on bills introduced to extend the mileage of the Interstate Highway System.

● **Investment tax credit.** At the request of the President in an effort to ease economic pressures of a high level of capital spending, the Congress enacted Public Law 89-800 suspending from Oct. 10, 1966, to Jan. 1, 1968, the tax credit of up to 7% of capital expenditures for most facilities other than buildings and partly suspending provisions for accelerated depreciation on buildings. Expenditures for projects under way or under binding contracts prior to Oct. 10, 1966, are generally exempt from the suspension. Provision for computation of a "phantom" tax credit on property ordered during the suspension period will limit to that extent the use of credits carried forward from prior years. Following the suspension period, however, the carry-forward provisions are changed from 5 years to 7 years and the maximum yearly allowance is raised from 25% to 50% of total income tax liability. Efforts to exempt railroad equipment from the suspension, in order to avoid disruption of modernization programs, were not successful.

● **Retirement provisions.** Public Law 89-699 established, effective Nov. 1, 1966, a five-year temporary program of employer-financed annuities supplemental to regular retirement benefits under the Railroad Retirement System. Employees retiring at age 65 or over and with 25 years of railroad service will receive supplemental annuities of $45 per month plus $5 for each year of service over 25 and through 30 years, with a maximum of $70 per month. The supplemental annuity, however, will be reduced by the amount of any private pension to the extent that it is paid for by the employer.

The new supplemental annuity plan is supported by an excise tax upon employers of two cents per employee-hour paid for effective in November 1966, payable into a Railroad Retirement Supplemental Account. Employers will receive a tax credit equivalent to any reductions in supplemental annuities by reason of employer-supported private pensions.

Payment of supplemental annuities under the law is to terminate at the end of five years (October 1971). The Railroad Retirement Board is authorized to reduce annuities payable in the fifth year if necessary to balance the Supplemental Account.

PL 89-699 also provided an increase of 7% in basic retirement-survivor benefits for present and future beneficiaries who did not receive such an increase as a result of the 1965 Social Security amendments (by reason of tie-in provisions) or who will not receive a supplemental annuity at least equal to a 7% increase.

Effective in January 1967 basic Railroad Retirement tax rates on both employer and employee were increased ¼ of 1% in order to support the 7% increase in benefits. Thus, in 1967 the tax rate on each side is 8.15% for Railroad Retirement and .50% for health insurance (Medicare) or a total of 8.65% on monthly earnings up to $550. In addition, as stated above, employers will pay an excise tax of two cents per employee-hour paid for to provide supplemental annuities, less credits for employer-financed private pensions.

A series of technical changes in the Railroad Retirement Act were enacted by Public Law 89-700, designed to facilitate administrative procedures and to correct certain inequities, some of which had grown out of amendments of the Social Security Act in 1965. One amendment provides children's survivor annuities for full-time students aged 18 to 21 years, in line with a similar extension under the Social Security amendments. Another changes the calculation of residual lump sum benefits so as to insure that an employee and his family will receive in benefits not less than the amount paid by the employee in retirement taxes. According to the Retirement Board, these and other technical amendments increased the actuarial deficiency of the Railroad Retirement system by $7.8 million to a total of $37.6 million per year.

● **Parcel post.** A Post Office Department proposal to increase size and weight limitations was vigorously opposed by REA Express. Public Law 89-593 as enacted provided for gradual increases in limitation over a five-year period. The length and girth limit will rise from 72 to 84 inches, and the maximum weight will increase from 20

to 40 pounds for parcels moving beyond the second zone. The law established an Advisory Committee on Parcel Post Distribution Services to study and report on the effect of these changes on common carriers engaged primarily in express service, including suggestions for protecting such carriers if found to be necessary. Parcel post rates were raised by an average of 10 cents per parcel on zone-rated shipments, effective Jan. 15, 1967.

● **Per diem.** Public Law 89-430 gave the ICC broadened authority in setting freight-car rental rates (per diem). Compensation levels can be established by the ICC either on the sole basis of ownership elements, including a fair return, or with the addition of an incentive feature when such is found to be justified. The Commission can exclude from the incentive payment requirement any group of carriers when it finds such exemption to be "in the national interest."

● **High-speed ground transport.** Public Law 89-797, an appropriations act, provided $22 million for the High-Speed Ground Transportation Research Program. Included also were $3 million for general transportation research and $7.5 million for maritime research and development.

Various projects were instituted and progressed during 1966, under the previously approved High-Speed Ground Transportation Act (Public Law 89-220). Power systems, soil mechanics, marketing tests and data systems were under study at year end. Included among the contracts let during 1966 was one to upgrade a 21-mile stretch of test track over which to run four specially designed test cars to develop data on the dynamics of high-speed ground transport.

● **Mass transit.** Public Law 89-562 extended for two years the federal program of grants and loans for urban mass transit projects. The law authorized $150 million annually through 1969.

Hearings were held on bills which would provide subsidies of up to two-thirds of the out-of-pocket losses on any commuter train, bus or subway operation which could develop reasonable forecasts of profitable operation within 10 years. Another proposal on which no action was taken would permit states to use for mass transit grants funds received from the Highway Trust Fund.

● **Public works affecting navigation.** Public Law 89-689 appropriated in excess of $1 billion for water resource projects, including $500,000 for planning the billion-dollar Lake Erie-Ohio River Canal project, $200,000 for a restudy of the Trinity River (Texas) project and additional construction funds for navigation on the Arkansas River (over $85 million), the Cross-Florida Barge Canal ($16 million) and the Kaskaskia River (Illinois) ($3.5 million).

● **Special adjustment boards.** Public Law 89-456 provided for special adjustment boards to resolve labor disputes otherwise referable to the National Railroad Adjustment Board and modified certain procedures of the Board. The special boards are to be established 30 days after a request by either carriers or employees.

● **Uniform time.** Public Law 89-387 established nationwide daylight saving time observance during the same period of the year unless the legislature of a particular state acts to exempt the entire state. Otherwise daylight saving time will be in effect uniformly between the last Sunday in April and the last Sunday in October.

● **Hours of service bills.** Hearings were held on bills to (1) reduce, for employees engaged in or connected with the movement of trains, the maximum permissible hours of continuous service on duty from 16 to 12; (2) require at least eight consecutive hours off duty during the previous 24-hour period before continuing on duty; and (3) reduce to 9 the number of hours a locomotive engineer could be continuously on duty when he is the only engine crewman. A House Subcommittee voted to postpone further action until the findings of a staff study are reported.

● **St. Lawrence Seaway.** Bills were introduced proposing to convert into capital stock to be owned by the federal government the present revenue bond obligations and the associated accruing interest of the St. Lawrence Seaway Development Corporation, to repeal the provision requiring repayment of construction cost, to require federal appropriations for maintenance costs instead of the present requirement that tolls meet such needs, and to freeze the toll structure at present levels.

● **Agricultural cooperatives.** Hearings were held on proposals to amend the Interstate Commerce Act to exempt agricultural cooperatives from ICC regulation only if they applied for the exemption and could demonstrate their eligibility. As part of the qualification process, their books and records would be open to ICC inspection.

Early in 1966 the U.S. Supreme Court had refused to review an appeals court decision which reversed an ICC ruling against the use of farm cooperatives' motor vehicles in for-hire service moving non-farm commodities on back-hauls.

● **State excess-crew laws.** In a referendum action, voters in the state of Washington repealed that state's excess-crew law. Two sections of the excess-crew law in New York were repealed by the state legislature; the provision referring to firemen remains.

On two occasions during 1966 the U. S. Supreme Court supported the legality of certain state excess-crew laws. The Court overturned a three-judge court ruling that the Federal Arbitration Award superseded the Arkansas law and also refused to hear an appeal from a State Supreme Court decision upholding the Indiana statute.

● **Other proposals.** Matters on which no action was taken in the second session of the 89th Congress included bills to allows railroads to substract local real property taxes paid on rights-of-way from taxes owed the Federal Government; authorize Presidential action in labor disputes imperiling public health and safety including provisions for fact finding, a "cooling-off" period and the appointment of a receiver to operate struck facilities if a court deems such to be necessary to protect the public interest; create Presidential boards to investigate and make final rulings in labor disputes involving transportation and other essential industries; direct the Secretary of Labor to study the operations and adequacy of existing procedures for handling emergency labor disputes; require the ICC to continue rail passenger service for at least one year following a railroad request to discontinue commuter runs; amend Section 13a(2) of the Interstate Commerce Act by extending from 120 to 180 days the time allowed state regulatory agencies to review passenger train discontinuance proposals before they are submitted to the ICC; prevent curtailment or abandonment of railroad commuter service until proposed grants and subsidies have been found ineffective in developing a sound financial structure for such service; incorporate automatic cost-of-living increases into the benefits payable under the Railroad Retirement Act; suspend temporarily the authority of the Interstate Commerce Commission to approve consolidations, unifications, or acquisitions of control of railroad properties; make it unlawful for any State or subdivision thereof to assess common carrier property at a value which bears a higher ratio to the true market value than that of other property in the taxing district; establish uniform rules for levying state taxes on companies doing interstate business; permit the Post Office

# Merger and control proposals in the limelight

Department to use regulated motor carriers of property for transporting U.S. mail on the same basis as railroads; and remove restrictions on railroad development of coal resources through lease of Government-owned land.

## Administrative proceedings

• **Railroad mergers.** The Chesapeake & Ohio control of the Chicago South Shore & South Bend, scheduled to become effective in January 1967, was the only consolidation proceeding involving major railroads concluded during 1966. The ICC-approved control of the Chicago & Eastern Illinois by the Missouri Pacific was upheld by a Federal Court during the year, but the decision was appealed to the U.S. Supreme Court. The Atlantic Coast Line and Seaboard Air Line merger was delayed further by a second appeal to the Supreme Court.

The Commission approved the merger of the Pennsylvania and New York Central railroads. Further hearings were held, however, and the effective date of the merger was postponed when the Supreme Court agreed to review certain matters relating to the decision. The Commission denied the merger proposal of the Northern Pacific, Great Northern and Chicago, Burlington & Quincy, but petitions for reconsideration were filed. An ICC hearing examiner recommended approval of the merger of the Chicago & North Western and the Chicago Great Western. The previously consummated case regarding control of the Central of Georgia by the Southern was reopened following Supreme Court action returning the case to the Commission for further clarification of the employee protective provisions included in that decision.

The following additional merger and control proposals involving Class I railroads were in various stages of consideration before the ICC at year end: (1) control of the Western Maryland by the Chesapeake & Ohio/Baltimore & Ohio; (2) merger of the Texas & Pacific and the Missouri Pacific; (3) competing proposals by the Union Pacific to merge with, and the C&NW to control, the Chicago, Rock Island & Pacific; (4) control of the Atchison, Topeka & Santa Fe by the Missouri Pacific and the Mississippi River Fuel Corporation; (5) merger of the C&NW and the Chicago, Milwaukee, St. Paul & Pacific; (6) competing proposals by the Missouri Pacific and the St. Louis Southwestern to purchase the Alton & Southern; (7) merger of the Norfolk & Western and the Chesapeake & Ohio along with the proposed acquisition and operation, by new subsidiaries, of the Erie Lackawanna, Delaware & Hudson, Boston & Maine, Reading, and Central Railroad of New Jersey; and (8) merger of the Erie Lackawanna, D&H, and B&M into the N&W under ICC conditions set forth in the previously approved N&W and New York, Chicago & St. Louis merger case.

At year end Commissioner Webb, acting as examiner, recommended to the Commission that the N&W, by setting up a holding company, be ordered to take over the Erie Lackawanna and D&H railroads and be authorized to take over the B&M. He further recommended that this plan not go into effect until consummation of the merger of the New York Central and Pennsylvania railroads.

• **Intermodal relations.** The U. S. Supreme Court agreed to review a District Court decision reversing the ICC "open-tariff" finding in Ex Parte No. 230 that would require railroads, when offering TOFC service, to make the service available to motor and water carriers at the same rates available to non-carrier shippers.

A District Court ruled that a barge line could purchase an operating motor carrier, affirming the ICC position that regulations applying to railroad intermodal acquisitions are not applicable when the purchaser is a water carrier.

The ICC, in Docket No. 34695, required Class I railroads and motor carriers to file with it a duplicate copy of statements required by the Securities and Exchange Commission regarding ownership of equity securities in other regulated carriers.

• **Railroad-owned trucks.** In Docket No. MC-C-5086, the ICC was asked by a railroad labor union to reclassify rail-affiliated trucks from motor carrier service, regulated under Part II of the Interstate Commerce Act, to service auxiliary or supplemental to railroads, regulated under Part I of the Act. Reply briefs were filed.

• **Cost evidence.** An ICC examiner, in Docket No. 34013, recommended rejection of a proposal that the Commission adopt certain cost formulas and studies and extend prima facie standing to them. The report additionally recommended many changes including new terminology to replace present cost terms, use of an intermediate time period of 5 to 10 years to determine cost variability rather than the indeterminate "long-run" and a "crash program" to develop new costing procedures. The examiner favored the use of particular costs rather than average data. He said "variable costs should be used to determine the minimum compensatory level of rates." He also recommended that, in intermodal cases, the low-cost carrier be defined as the low full-cost carrier and that, when the rate of the high-cost carrier is shown to be below its full cost, the low-cost carrier should be protected by rate differentials reflecting the respective levels of fully-distributed cost of the competitors. Parties have until March 1967 to file exceptions.

• **Council of Economic Advisers.** The President's Council of Economic Advisers, in its Annual Report, said that "marginal, rather than average, cost should be the principal regulatory criterion in applications for rate reductions." The Council went on to note that "for maximum economic efficiency, rates should be related to costs, but not to an arbitrary allocation of costs." Further, "costs should reflect the value of all resources required to provide the service . . . . [and] . . . . adequate user charges should be instituted in the interest of both equity and over-all transportation efficiency."

• **Rate divisions.** A court decision is expected in 1967 on the appeal by 42 Southern carriers of the ICC decision in Docket No. 29885 which established a new division of rates on North-South traffic, increasing the share of the Northern carriers.

The Transcontinental rate divisions case, Docket No. 31503, was settled in the main by action of the railroads involved. At year end, certain issues involving Midwestern carriers remained and were awaiting court action.

• **REA Express cases.** In ICC Docket No. MC-66562, REA Express applied for the removal of restrictions from several thousand of its motor carrier certificates which require REA's truck operations to be aligned closely with rail operations. Hearings were held during 1966.

The full Commission heard arguments on an Examiner's recommendation in Ex Parte No. 242, to limit REA pick-up and delivery areas to the terminal areas of motor carriers and freight forwarders.

The Supreme Court agreed to review

a District Court opinion upholding ICC approval of a Greyhound Corporation proposal to purchase a 20% stock interest in REA Express.

• **Freight car hire.** The ICC, in Ex Parte No. 252, announced that under its broadened powers in car hire matters it would consider an incentive per diem charge for freight cars on an experimental basis to apply to types of cars it finds in short supply. Statements were filed and hearings were begun in 1966.

Exceptions and replies were filed in Dockets No. 31358, 33145 and 34405, the freight car per diem cases, and No. 34480 involving tank car mileage allowances in which proposed reports were released near the close of 1965. Oral argument was heard by the full Commission in the tank car mileage case.

• **Freight car supply.** ICC staff members, in statements filed in Ex Parte No. 241, *Investigation of Adequacy of Railroad Freight Car Ownership, Car Utilization, Distribution Rules and Practices,* proposed increased freight car ownership, new car service rules and changes in railroad record-keeping and reporting, all aimed at improved car supply. Reply statements were filed during 1966.

• **Grade crossings.** The U. S. Supreme Court affirmed the ruling of a District Court which sustained the ICC decision in Docket No. 33440, that although it had the power to write safety regulations for motor vehicles under its jurisdiction it would not encroach upon the police power of the states where highway-railway grade-crossing safety was at issue.

• **Discriminatory state taxes.** The U. S. Supreme Court refused to review (thereby allowing to stand as final) an Illinois Supreme Court ruling that 13 railroads operating in the state were entitled to refunds for taxes paid on property assessed at a higher rate than the assessment level for other-than-railroad property.

• **Safety appliance standards.** An ICC examiner, in Docket No. 34468, recommended revision of the safety appliance standards for box and other house cars on both new and existing cars other than those with roof hatches. The recommendations include eliminating the requirement for roof running boards, substituting short for high ladders and locating hand brakes at a low position. The proposed report became the order of the Commission in the absence of any exceptions.

• **Locomotive inspection rules.** An ICC examiner, in Ex Parte No. 243, recommended adopting a number of railroad-proposed revisions in the rules governing inspection and testing of locomotives. However, the examiner denied a proposal to reduce general locomotive inspection from a monthly to a quarterly basis. Exceptions and replies to exceptions were filed during 1966.

• **Proposed waterway projects.** The Board of Engineers for Rivers and Harbors recommended that the proposed Lake Erie-Ohio River Canal be approved, at an estimated cost of more than $1 billion. In its report, the Board noted that local support for the project, a necessary prior condition, had not yet been obtained.

The Board recommended approval of the half-billion-dollar Red River project in Arkansas, Louisiana, Oklahoma and Texas. The navigation portion of the project, extending from the vicinity of Shreveport to Lone Star, Texas, is to be re-studied prior to construction. In addition, the Board recommended approval of a navigation project on the Missouri River to extend beyond Sioux City, Iowa, as far as Yankton, S.D.

The Chief of Engineers made a "tentative determination" that construction of the $316-million Tennessee-Tombigee waterway was economically justified.

The International Champlain Waterway Board submitted to the International Joint Commission an unfavorable report on a proposed waterway linking the Hudson and St. Lawrence Rivers via Lake Champlain. Public hearings on the matter were held but no report was made by the Commission to the United States and Canadian Governments.

• **St. Lawrence Seaway tolls.** Both the American and Canadian authorities conducted hearings during the year to consider raising tolls on the Seaway. In a report to the Secretary of Commerce dated Dec. 1, 1966, the Seaway Corporation recommended that the proposed increase of approximately 10% on the Montreal-Lake Ontario sector be accepted. This and other matters are subject to negotiation with Canadian authorities.

• **"Priority mail."** A Civil Aeronautics Board Order (E-23685 in Docket No. 16349) discontinued the investigation of a proposed rate plan for combining first-class mail and airmail into a new "priority class" of service.

• **Truck operations.** The ICC took no action during 1966 in Ex Parte No. MC-65 and MC-65 (Sub-No. 2), a study of the effect of the Interstate system of highways and other limited access routes on regular-route truck and bus operations. ■

# Legislative prospects dim

*(Continued from page 68)*

The bid for authority to amortize reorganization expenses also remains among the railroad tax proposals. This would not confine the write-offs to costs of reorganizing bankrupt roads—it would also permit amortization of costs of merger studies and expenses involved in consummating mergers. These costs are now capitalized.

• **Mechanical grain inspection.** Two items on the railroad's list of secondary proposals will get what might be called "A-2 priorities" for 1967. They propose amendment of the Grain Standards Act to permit mechanical inspection of grain, and amendment of the Federal Criminal Code to provide that committing acts dangerous to persons on trains shall be a federal offense. Mechanical grain inspection is advanced as a plan for expediting the movement of grain cars and thus contributing to alleviation of car shortages.

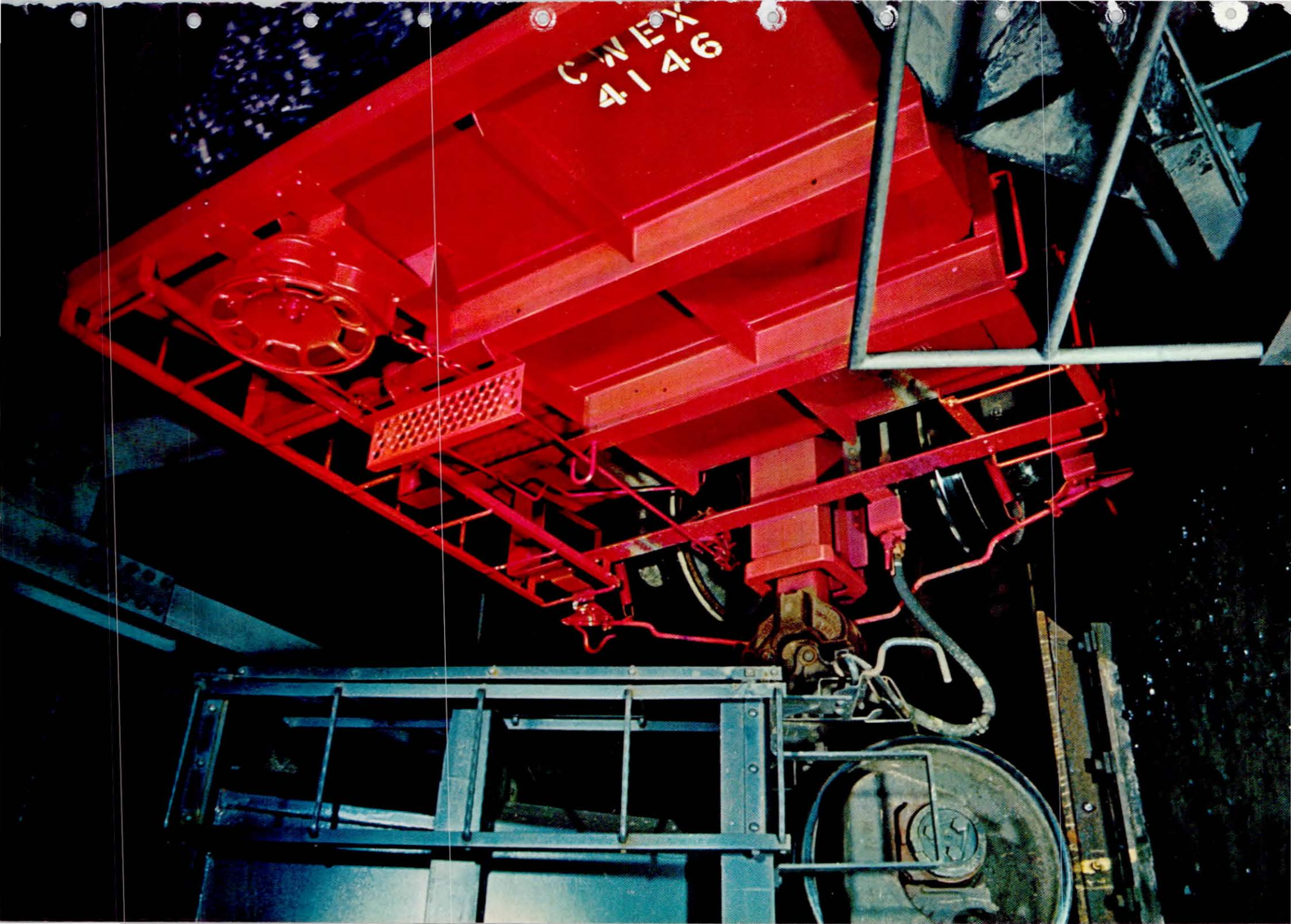
Meanwhile, no undertaking is planned this year to advance that major proposal on the railroad program which calls for diversification rights. That means freedom to operate other forms of transport. The railroads still think this is the soundest approach to transport coordination, but it is vigorously opposed by their competitors to whom the proposed freedom would also apply.

Lack of prospects for favorable Congressional action has kept the proposal dormant.

• **Hours of service.** As usual, the railroads in 1967 will also be fighting legislative proposals which they consider adverse to the industry. Foremost among these is expected to the proposal to tighten hours-of-service requirements applicable to trainmen and enginemen.

This was deferred for further study by Congressional committees which had last year's implementing bill under consideration. The committee studies have included requests for advice from the ICC.

Last year's bill was sponsored by the Brotherhood of Locomotive Firemen & Enginemen and the Order of Railway Conductors & Brakemen. It was opposed by the Brotherhood of Locomotive Engineers, while the Brotherhood of Railroad Trainmen remained neutral. However, a modified bill supported by all interested unions might be shaped up for this session. ■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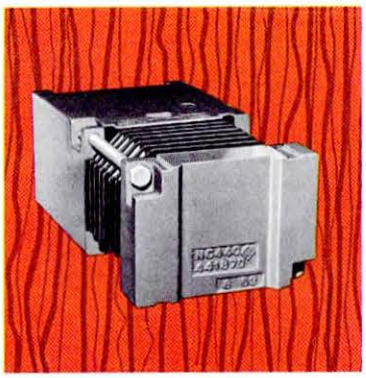
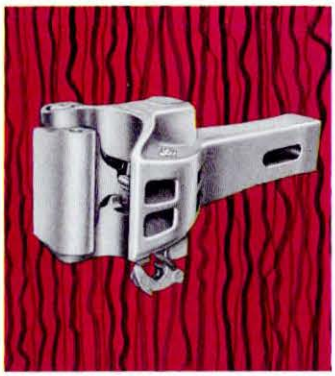
# *National-developed coupler does the twist... turns the tables on coal transportation costs*

***Rotating fully loaded coal cars*** through 180 degrees and back again, without uncoupling, is a neat twist — if you can do it. And you can, with National Rotary F Couplers. □ But, more importantly, it's also a logical, sensible way to use *conventional* cars to slash, by about 50%, the costs of bulk commodity haulage. Gone are complicated trapdoors, electric motors, trouble-prone mechanisms. □ Rotary F Couplers are a tangible result of National's creative, and often non-conformist, approach to solving Railroading's biggest headache — operating costs. Perhaps you do not yet contemplate unit train operations, but you *do* have cost problems. National research may already be probing in your cost area . . . may already have solved your own particular problem. □ To be a leader, do business with the leader. In railroad research and development, that's National. *Every National product proves it by performing better — at lower cost.*

***Draft Gear Leadership*** ▶ National makes more different types of rubber draft gears. These include the NC-440, the only M-901-E gear with full cushioning capacity of 85,000 ft lbs at 1,200,000 lbs force.



***Coupler Leadership.*** National has made more couplers, and more types of couplers, than any other manufacturer.



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'66 REVIEW

# S&C, rolling stock and M/W statistics

## RAILROAD SIGNALING INSTALLED IN 1966

| Railroad | Highway Grade Crossings Protected By | | Centralized Traffic Control | | | | Interlockings | | | | Miscellaneous Signal Units * |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Flashing light signals | Flashing light signals & gates | Road Miles | Switches | Electric Locks | Signals | No. of Plants | Switches | Signals | Detectors † | |
| Alaska | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Algoma Cent | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| A&S | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 78 |
| AT&SF | 55 | 50 | 24 | .. | .. | .. | .. | .. | .. | 16 | .. |
| A&SAB | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 6 |
| A&WP | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 |
| Ga | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| ACL | 29 | 14 | 8 | .. | 2 | 7 | .. | .. | .. | 12 | .. |
| B&O | 22 | 10 | 58 | 6 | 3 | 44 | 6 | 17 | 39 | 14 | 1 |
| BAR | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| BRyC | .. | .. | .. | .. | .. | .. | .. | .. | .. | 55 | .. |
| B&LE | 1 | .. | .. | 2 | 1 | 1 | .. | .. | .. | 1 | .. |
| B&M | 3 | 1 | 11 | 2 | .. | 8 | 3 | .. | .. | 3 | 11 |
| CP | 86 | 13 | 330 | 81 | 15 | 416 | 1 | .. | 8 | .. | 5 |
| CNJ | 1 | 4 | .. | .. | .. | .. | 1 | 2 | 4 | .. | 4 |
| C&O | 30 | 10 | 16 | 2 | 2 | 22 | 1 | 2 | 4 | .. | .. |
| CB&Q | 19 | 8 | 34 | 12 | 17 | 74 | .. | .. | .. | 8 | .. |
| C&EI | 3 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| CGW | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| CMStP&P | 30 | 8 | 2 | 7 | 9 | 13 | .. | .. | .. | 6 | .. |
| C&NW | 28 | 3 | .. | .. | .. | .. | 3 | 11 | 26 | 10 | 97 |
| CRI&P | 3 | 10 | .. | .. | .. | .. | 1 | .. | 2 | 82 | 13 |
| CSS&SB | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| CTA | .. | .. | .. | .. | .. | .. | 1 | 13 | 15 | 1 | 60 |
| C&S | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| FW&D | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| D&H | 6 | 5 | .. | .. | .. | .. | 1 | 10 | .. | 10 | 11 |
| D&RGW | 8 | 2 | 24 | 5 | 5 | 32 | .. | .. | .. | 25 | 10 |
| DT&I | 1 | 2 | .. | .. | .. | .. | 1 | .. | 2 | 11 | 28 |
| Ann Arbor | 4 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. |
| DM&IR | 4 | .. | 2 | 5 | .. | 6 | .. | .. | .. | .. | 1 |
| EJ&E | 1 | .. | 3 | 9 | .. | 19 | 1 | 4 | 9 | .. | 2 |
| EL | 8 | 6 | 11 | 4 | 1 | 8 | 2 | 8 | 10 | .. | 12 |
| FEC | 27 | 5 | 90 | 18 | 18 | 130 | .. | .. | .. | .. | 20 |
| GN | 20 | 5 | 38 | 6 | 21 | 28 | 1 | 1 | 4 | 3 | 18 |
| GB&W | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| GM&O | 9 | 1 | 27 | 4 | 14 | 32 | .. | .. | .. | 13 | .. |
| IC | 27 | 11 | 8 | 6 | 2 | 16 | 2 | 4 | 20 | 6 | .. |
| IT | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| LV | 2 | .. | 33 | 18 | 23 | 56 | 1 | 10 | 12 | .. | 5 |
| LI | .. | 7 | 2 | 2 | .. | 3 | .. | .. | .. | .. | .. |
| L&N | 13 | 2 | 84 | 21 | 35 | 76 | 1 | 7 | 9 | 3 | 5 |
| MEC | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| MKT | 11 | .. | .. | .. | .. | .. | 1 | .. | 8 | .. | 10 |
| MP | 20 | 3 | .. | .. | 1 | 1 | 1 | 18 | 12 | .. | 2 |
| Monon | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 11 |
| NYC | 42 | 12 | 40 | 15 | 14 | 66 | 6 | 11 | 23 | 52 | 25 |
| NYCTA | .. | .. | .. | .. | .. | .. | 2 | 24 | 49 | .. | 122 |
| NYNH&H | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| NS | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| N&W | 21 | 20 | 69 | 18 | 26 | 80 | .. | .. | .. | 45 | 55 |
| NP | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | 11 | 120 |
| ONL | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| PGE | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| PRR | 15 | 30 | 11 | .. | 9 | 5 | 9 | 3 | 6 | 3 | 60 |
| PRSL | 3 | 1 | 7 | .. | 3 | .. | 2 | 2 | 6 | .. | .. |
| RDG | .. | 2 | 6 | .. | 8 | 7 | 4 | 12 | 16 | 5 | 2 |
| RF&P | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 | 14 |
| StL-SF | 24 | 7 | 27 | 3 | 2 | 40 | 1 | 4 | 23 | 4 | 8 |
| StLSW | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | 39 | .. |
| SAL | 32 | 11 | 19 | 6 | 14 | 10 | 1 | .. | .. | 19 | 4 |
| SOO | 10 | 1 | 90 | 10 | 7 | 30 | .. | .. | .. | .. | .. |
| SOU | 19 | 12 | 74 | 41 | 145 | 143 | .. | .. | .. | 5 | 78 |
| SP | 30 | 125 | 13 | .. | .. | 5 | 1 | 8 | 12 | 78 | 40 |
| SP&S | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tenn. Cent | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| TRAStL | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Union | .. | .. | .. | .. | .. | .. | 2 | 6 | 1 | .. | 2 |
| UP | 19 | 20 | .. | .. | .. | .. | 2 | 80 | 96 | 2 | 107 |
| WM | 2 | .. | 4 | 1 | 2 | 5 | .. | .. | .. | 3 | 2 |
| WP | 9 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Totals | 761 | 459 | 1,165 | 304 | 400 | 1,383 | 60 | 257 | 417 | 590 | 1,066 |

†Detectors include high load, hotbox, dragging equipment, broken or loose wheel, wide load, and presence.
*Includes automatic train stops, cab signals, automatic blocks signals, retarders, non-interlocked power switches, spring switches and electric locks not in CTC territory, snow melters (switch heaters), train order and other indication signals, electric switch lamps.

## RAILROAD COMMUNICATIONS INSTALLED IN 1966

| Railroad | Radio | | | Intercommunications | | | Carrier Equipment Terminals and Repeaters | | | Telephone | | Tele-type-writers | Micro-wave Stations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mobile | Base | Walkie-Talkies | No. of Yard Loud-speaker Systems | Loud-speakers | Tele-phones | Voice | Speech and Tele-graph | Tele-graph | Ex-changes | Stations Available | | |
| Alaska | 4 | .. | .. | .. | .. | .. | 12 | .. | 1 | .. | .. | .. | .. |
| A&S | .. | 2 | .. | 2 | 36 | 2 | .. | .. | .. | 1 | 200 | 4 | .. |
| AT&SF | 120 | 5 | .. | .. | .. | .. | 12 | .. | .. | 2 | .. | .. | 15 |
| A&SAB | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| A&WP | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ga | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| WRyA | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| ACL | 107 | 12 | 160 | 2 | 5 | .. | 21 | .. | .. | .. | .. | .. | .. |
| B&O | 58 | 11 | 92 | 2 | 33 | 17 | 16 | .. | .. | 1 | 35 | 158 | .. |
| BAR | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| BRyC | 3 | 1 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| B&LE | 28 | 6 | 12 | 1 | .. | 4 | 2 | .. | .. | .. | .. | 1 | .. |
| B&M | 15 | 4 | 20 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. |
| CN | 95 | 13 | 82 | .. | .. | .. | 654 | .. | 1,384 | 37 | 2,000 | 3,153 | .. |
| CP | 90 | 12 | 145 | 1 | 21 | 2 | 294 | .. | 1,189 | 7 | 78 | .. | .. |
| CNJ | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| C&O | 99 | 29 | 548 | 3 | 22 | .. | 10 | .. | . | 1 | 45 | 292 | .. |
| CB&Q | 72 | 18 | 6 | 4 | 27 | 30 | 38 | 12 | .. | .. | .. | 20 | 9 |
| C&EI | 4 | 1 | 50 | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. |
| CGW | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| CMStP&P | 62 | 13 | 25 | 5 | 27 | .. | 22 | 10 | 2 | 2 | 43 | 74 | .. |
| C&NW | 969 | 150 | 1,056 | 2 | 23 | .. | 54 | 4 | .. | 5 | 350 | .. | .. |
| CRI&P | 167 | 7 | 136 | .. | .. | .. | 66 | .. | .. | 6 | 750 | 42 | .. |
| CSS&SB | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| C&WI | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| CTA | .. | .. | 3 | 3 | 18 | 6 | .. | .. | .. | .. | .. | .. | .. |
| Clinchfield | 11 | 4 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| C&S | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| D&H | 1 | 1 | 50 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| DT&I | 5 | 1 | 6 | 2 | 13 | .. | .. | .. | .. | .. | .. | 1 | .. |
| DM&IR | 8 | .. | 12 | .. | .. | .. | .. | .. | .. | 1 | 60 | .. | .. |
| EJ&E | 62 | 2 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| EL | .. | 1 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. |
| FEC | 7 | 1 | .. | 1 | 12 | .. | .. | .. | .. | 1 | 36 | .. | .. |
| GN | 47 | 12 | 155 | 4 | 38 | 5 | 2 | .. | .. | 1 | 76 | .. | .. |
| GB&W | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| GM&O | 39 | 11 | 8 | .. | .. | .. | 20 | .. | 8 | .. | .. | .. | .. |
| IC | 140 | 11 | 220 | 1 | 23 | .. | 42 | 8 | 2 | .. | .. | 29 | .. |
| IT | 10 | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| KCS | 10 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| LV | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 50 | 9 | .. |
| LI | 7 | 3 | 60 | 12 | 51 | .. | .. | .. | .. | 1 | 500 | 9 | .. |
| L&N | 130 | 96 | 479 | 2 | 26 | .. | 3 | .. | .. | .. | .. | 8 | .. |
| MEC | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| MKT | 37 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| MP | 45 | 19 | 14 | .. | .. | .. | 137 | 62 | 62 | 10 | 500 | .. | .. |
| Monon | 6 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. |
| NYC | 686 | 50 | 125 | 7 | 101 | 8 | 2 | .. | .. | .. | .. | 290 | .. |
| NYNH&H | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 510 | 1 | .. |
| N&W | 163 | 16 | 110 | 4 | 102 | 10 | 47 | 4 | .. | 2 | 250 | 31 | 2 |
| NP | 21 | 4 | 21 | 3 | 42 | .. | 5 | .. | 2 | 1 | 70 | 7 | .. |
| ONL | 41 | 4 | 37 | .. | .. | .. | 30 | .. | .. | .. | .. | 18 | .. |
| PGE | 21 | 2 | 8 | .. | .. | .. | 15 | .. | .. | .. | .. | .. | 1 |
| PRR | 2,401 | 233 | 80 | 4 | 54 | 12 | 91 | .. | 34 | 7 | .. | 11 | .. |
| P&N | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| RDG | 86 | .. | 74 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| RF&P | 5 | 4 | 37 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| StL-SF | 38 | 1 | 5 | 2 | 16 | .. | .. | .. | .. | .. | .. | 8 | .. |
| SAL | 7 | 1 | 97 | .. | .. | .. | 55 | .. | 20 | .. | .. | 7 | .. |
| SOO | 50 | 9 | 38 | .. | .. | .. | 26 | .. | 6 | .. | .. | .. | .. |
| SOU | 151 | 10 | 11 | 5 | 41 | .. | 34 | .. | .. | 5 | 475 | .. | 25 |
| CofG | 29 | 3 | 147 | 2 | 2 | .. | 18 | .. | .. | 2 | 200 | .. | 4 |
| SP | 369 | 13 | 71 | 2 | 24 | .. | 54 | 6 | 40 | .. | .. | 221 | 29 |
| SP&S | 12 | 4 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Union | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| WM | 6 | 5 | 16 | .. | .. | .. | 2 | .. | .. | .. | .. | 8 | .. |
| WP | .. | .. | .. | .. | .. | .. | 16 | .. | .. | .. | .. | 46 | 2 |
| Totals | 6,599 | 815 | 4,292 | 76 | 757 | 96 | 1,810 | 106 | 2,750 | 102 | 6,228 | 4,470 | 87 |

## 1966 FREIGHT-TRAIN CAR ORDERS

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| Akron, Canton & Youngstown | 20 | Cov. Hopper | 200,000 | 49 | 9 | 62,000 | Sept. | Mar. '67 | ACF |
| Apalachicola Northern | 50 | Flat | 140,000 | .. | .. | ..... | April | Feb. '67 | Thrall Car |
| Atchison, Topeka and Santa Fe | 300 | Box | 140,000 | 50 | 6 | ..... | Jan. | July-Sept. | GATX |
| | 42 | Box | 140,000 | 60 | 9 | ..... | Apr. | Nov. | Pullman-Standard |
| | 1 | Box | 200,000 | 60 | 9 | ..... | Apr. | Dec. | Pullman-Standard |
| | 17 | Box | 200,000 | 86 | 6 | ..... | Oct. | May '67 | Thrall Car |
| | 200 | Hopper | 140,000 | 40 | 8 | ..... | Jan. | Aug.-Sept. | Greenville Steel |
| | 50 | Gondola | 140,000 | 65 | 6 | ..... | Jan. | Dec. | Darby Corp. |
| | 300 | Gondola | 140,000 | 53 | 6 | ..... | Jan. | 2nd Half | Transco, Inc. |
| | 2500 | Cov. Hopper | 200,000 | 49 | 6 | ..... | Feb. | 2nd Half | Pullman-Standard |
| | 64 | Hopper | 200,000 | 49 | 6 | ..... | Feb. | Mar. | ACF |
| | 500 | Hopper | 200,000 | 49 | 6 | ..... | May | Feb. '67 | Pullman-Standard |
| | 36 | Box | 200,000 | 60 | 6 | ..... | Feb. | July | Pullman-Standard |
| | 128 | Box | 140,000 | 60 | 8 | ..... | Jan. | July-Aug. | Pullman-Standard |
| | 100 | Flat | 140,000 | 89 | .. | ..... | Jan. | Feb. | GATX |
| | 20 | Flat | 140,000 | 89 | .. | ..... | Jan. | Nov. | Thrall Car |

## 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 66 | Flat | 140,000 | 89 | .. | ..... | May | Sept.-Oct. | Whitehead & Kales |
| | 100 | Gondola | 200,000 | 52 | 6 | ..... | Feb. | 2nd Half | Greenville Steel |
| Atlantic Coast Line | 1000 | Cov. Hopper | 200,000 | 41 | 1 | 60,100 | Feb. | Aug.-Sept. | Pullman-Standard |
| | 600 | Cov. Hopper | 200,000 | 41 | 1 | ..... | May | Mar.-Apr. '67 | Pullman-Standard |
| | 400 | Hopper | 200,000 | 32 | 9 | 54,800 | Apr. | Sept.-Dec. | Bethlehem Steel |
| | 200 | Hopper | 140,000 | 50 | 9 | 72,400 | Apr. | Nov.-Jan. '67 | Greenville Steel Car |
| | 300 | Pulpwood | 140,000 | 45 | 4 | 55,800 | Mar. | Nov.-May '67 | General Steel Ind. |
| | 600 | Box | 100,000 | 40 | 6 | 55,700 | Feb. | Aug.-Sept. | Pullman-Standard |
| | 550 | Box | 100,000 | 40 | 6 | ..... | June | Aug.-Sept. '67 | Pullman-Standard |
| | 1 | Box | 140,000 | 60 | 8 | ..... | June | Dec. | Pullman-Standard |
| | 300 | Pulpwood | 140,000 | 50 | .. | ..... | Aug. | May-June '67 | Greenville Steel Car |
| Baltimore & Ohio | 31 | DF Box | 200,000 | 60 | 9 | 89,000 | Jan. | June | Company Shops |
| | 100 | DF Box | 140,000 | 50 | 6 | 78,300 | April | Oct. | Company Shops |
| | 100 | Box | 140,000 | 50 | 6 | 71,900 | April | Nov. | Company Shops |
| | 125 | Ins. Box | 140,000 | 50 | 1 | 79,200 | April | Nov. | Fruit Growers Express |
| | 200 | DF Box | 140,000 | 50 | 6 | 72,800 | April | Nov. | Company Shops |
| | 200 | DF Box | 140,000 | 50 | 6 | 72,600 | April | Jan. '67 | Company Shops |
| | 33 | Sp. Box | 200,000 | 60 | 9 | ..... | Oct. | Mar. '67 | Company Shops |
| | 290 | Sp. Box | 140,000 | 60 | 9 | 87,500 | ..... | June '67 | Company Shops |
| | 250 | Hopper | 200,000 | 40 | 8 | 61,500 | ..... | May '67 | Company Shops |
| | 125 | Cov. Hopper | 200,000 | 41 | 2 | 60,400 | Jan. | July | ACF |
| | 300 | Cov. Hopper | 200,000 | 49 | 9 | 62,000 | Mar. | Jan. '67 | ACF |
| | 200 | Cov. Hopper | 200,000 | 32 | 0 | 57,000 | April | April '67 | Pullman-Standard |
| | 150 | Coil Steel Flat | 200,000 | 40 | 0 | 69,000 | Jan. | Jan. '67 | Evans Products |
| | 100 | Gondola | 140,000 | 65 | 1 | 70,800 | Mar. | Nov. | Greenville Steel Car |
| | 100 | Gondola | 140,000 | 52 | 5 | 65,300 | May | Dec. | Company Shops |
| Bessemer & Lake Erie | 25 | Cov. Hopper | 200,000 | 49 | 6-1/4 | 63,000 | May | May '67 | Pullman-Standard |
| Boston & Maine | 20 | Hopper | 200,000 | 54 | 1 | 61,900 | Apr. | May | Pullman-Standard |
| Chattahoochee Industrial Railroad | 200 | Box | 140,000 | 50 | 6 | ..... | Feb. | Jan. '67 | Pullman-Standard |
| Chesapeake & Ohio | 250 | Hopper | 200,000 | 40 | 8 | 61,500 | Oct. | April '67 | Company Shops |
| | 88 | DF Box | 200,000 | 60 | 9 | 128,600 | Jan. | April | Company Shops |
| | 43 | DF Box | 200,000 | 60 | 9 | 129,800 | Jan. | June | Company Shops |
| | 6 | DF Box | 140,000 | 60 | 9 | 89,900 | Jan. | June | Company Shops |
| | 100 | DF Box | 140,000 | 50 | 6 | 78,300 | April | Sept. | Company Shops |
| | 100 | Box | 140,000 | 50 | 6 | 71,900 | April | Oct. | Company Shops |
| | 200 | DF Box | 140,000 | 50 | 6 | 72,600 | April | Jan. '67 | Company Shops |
| | 200 | DF Box | 140,000 | 50 | 6 | 72,800 | April | Nov. | Company Shops |
| | 125 | Ins. Box | 140,000 | 50 | 1 | 79,200 | April | Dec. | Fruit Growers Express |
| | 41 | Box | 200,000 | 86 | 6 | 107,000 | Oct. | May '67 | Thrall Car |
| | 3 | Sp. Box | 200,000 | 60 | 9 | ..... | Oct. | Mar. '67 | Company Shops |
| | 436 | Sp. Box | 140,000 | 60 | 9 | 87,500 | Oct. | Nov. | Company Shops |
| | 100 | Cov. Hopper | 200,000 | 29 | 7 | 58,500 | Jan. | Nov. | Gunderson Bros. |
| | 100 | Cov. Hopper | 200,000 | 49 | 9 | 62,000 | Mar. | Jan. '67 | ACF |
| | 100 | Cov. Hopper | 200,000 | 32 | 0 | 57,000 | April | April '67 | Pullman-Standard |
| | 110 | Coil Steel | 200,000 | 48 | 0 | 69,000 | Jan. | Jan. '67 | Evans Products |
| | 150 | Gondola | 200,000 | 52 | 5 | 82,600 | Mar. | July | Bethlehem Steel |
| | 300 | Gondola | 140,000 | 52 | 5 | 65,300 | May | Sept. | Company Shops |
| | 1000 | Gondola | 200,000 | 52 | 5 | 69,800 | Oct. | April '67 | Company Shops |
| | 1000 | Hopper | 200,000 | 45 | 0 | 59,260 | Mar. | Aug. | Bethlehem Steel |
| | 1000 | Hopper | 160,000 | 42 | 9 | 51,000 | Jan. | April | Company Shops |
| | 1400 | Hopper | 200,000 | 45 | 0 | 59,000 | Oct. | Jan. '67 | Company Shops |
| Chicago, Burlington & Quincy | 13 | Box | 200,000 | 60 | 9 | ..... | Apr. | Jan. '67 | Evans Products |
| | 200 | Box | 154,000 | 50 | 6 | ..... | Aug. | July-Aug. '67 | Company Shops |
| | 50 | Box | 154,000 | 40 | .. | ..... | Aug. | Sept. '67 | Pullman-Standard |
| | 2 | Box | 200,000 | 86 | 6 | ..... | Nov. | Mar. '67 | Thrall Car |
| | 150 | Ins. Box | 154,000 | 50 | 1 | ..... | Aug. | June-July '67 | Company Shops |
| | 100 | Gondola | 200,000 | 52 | 6 | ..... | Aug. | Sept.-Oct. '67 | Company Shops |
| | 100 | Gondola | 200,000 | 65 | .. | ..... | Aug. | Oct.-Nov. ,67 | Company Shops |
| | 50 | Gondola | 154,000 | 65 | .. | ..... | Aug. | Aug.-Sept. '67 | Company Shops |
| | 50 | Cov. Hopper | 200,000 | 34 | 1 | ..... | Apr. | Jan.-Feb. '67 | GATX |
| | 200 | Cov. Hopper | 200,000 | 53 | 3-1/8 | ..... | Aug. | Apr.-June '67 | ACF |
| | 350 | Cov. Hopper | 200,000 | 54 | 6-9/16 | ..... | Aug. | Apr.-June '67 | Pullman-Standard |
| | 70 | Hopper | 200,000 | 46 | 1/4 | ..... | Aug. | Nov. '67 | Company Shops |
| | 200 | Hopper | 200,000 | 47 | 11-1/2 | ..... | Aug. | Feb. '67 | Bethlehem Steel |
| | 50 | Caboose | ..... | .. | .. | ..... | Aug. | Apr. '67 | International Car |
| Chicago & Eastern Illinois | 6 | Caboose | ..... | .. | .. | 42,500 | Aug. | Dec. | Company Shops |
| | 25 | Flat | 140,000 | 60 | .. | 63,500 | Nov. | Feb. '67 | St. Paul Foundry & Manufacturing |
| Chicago Freight Car Leasing | 50 | Cov. Hopper | 200,000 | 50 | 3 | 64,000 | Jan. | Sept. | GATX |
| Chicago Great Western | 10 | Flat (Bulkhead) | 140,000 | 48 | 6 | 70,500 | Feb. | June | General Steel Ind. |
| | 50 | Cov. Hopper | 200,000 | 50 | 2 | 64,100 | Feb. | Sept. | GATX |
| | 100 | Box | 140,000 | 50 | 6 | ..... | Mar. | 1st Quart. '67 | Pullman-Standard |
| | 10 | Flat | 140,000 | 60 | .. | 59,100 | Apr. | Sept. | St. Paul Foundry & Manufacturing |
| | 20 | Box | 140,000 | 50 | 6 | ..... | May | 4th Quart. | St. Paul Foundry & Manufacturing |
| | 1 | Box | 140,000 | 60 | 9 | ..... | June | Dec. | Pullman-Standard |
| | 8 | Box (Insulated) | 140,000 | 50 | 1 | ..... | June | May '67 | GATX |
| Chicago, Milwaukee, St. Paul & Pacific | 190 | Cov. Hopper | 200,000 | 49 | 6-1/4 | 63,000 | ..... | June-Sept. | Pullman-Standard |
| | 65 | Ins. Box | 140,000 | 50 | 1 | 77,850 | Mar. | Sept. | GATX |
| | 800 | Box | 50,000 | 50 | 6 | 64,700 | Apr. | Oct. '66-Jan. '67 | GATX |
| | 300 | Cov. Hopper | 200,000 | 49 | 6 | 62,000 | May | Feb. '67 | Pullman-Standard |
| | 800 | Box | 140,000 | 50 | 6 | 67,500 | May | Jan. '67 | Pullman-Standard |
| | 50 | Cov. Gondola | 181,000 | 52 | 6 | 81,800 | June | Jan. '67 | Thrall Car |
| | 31 | Box | 200,000 | 60 | 9 | 80,700 | July | Jan. '67 | Pullman-Standard |
| | 100 | Ins. Box | 140,000 | 50 | 1 | 81,000 | May | April '67 | GATX |
| | 25 | Airslide Cov. Hopper | 200,000 | 48 | 11 | 71,100 | Aug. | Sept. | GATX |
| Chicago & North Western | 50 | Airslide Cov. Hopper | 140,000 | 29 | 6 | 55,400 | Jan. | Apr. | GATX |
| | 165 | Hopper | 200,000 | 47 | 11-1/2 | 61,200 | Jan. | July | Bethlehem Steel |
| | 25 | Gondola | 140,000 | 65 | 6 | 67,800 | Feb. | June | Magor Car |
| | 45 | Cov. Gondola | 140,000 | 52 | 6 | 71,000 | Mar. | Dec. | Thrall Car |
| | 45 | Cov. Gondola Mov. Bulkhead | 140,000 | 52 | 6 | 81,500 | Mar. | Dec. | Thrall Car |
| | 200 | Gondola | 140,000 | 65 | 6 | 68,200 | Mar. | Apr. '67 | Magor Car |
| | 45 | Coil | 200,000 | 48 | .. | 69,000 | Mar. | Mar. '67 | Evans Products |
| | 500 | Cov. Hopper | 200,000 | 49 | 6 | 63,000 | May | Jan. '67 | Pullman-Standard |
| | 36 | Box | 140,000 | 86 | 6 | 112,000 | July | Mar. '67 | Thrall Car |
| | 2 | Box | 140,000 | 86 | 6 | 112,000 | Sept. | Apr. '67 | Thrall Car |
| | 2 | Box | 200,000 | 86 | 6 | 114,000 | Sept. | Apr. '67 | Thrall Car |
| | 31 | Box | 140,000 | 60 | 9 | 87,000 | Oct. | Aug. '67 | Pullman-Standard |
| | 1 | Box | 140,000 | 60 | 9 | 87,000 | Oct. | Dec. | Pullman-Standard |
| | 2 | Box | 200,000 | 60 | 9 | 87,000 | Oct. | Aug. '67 | Pullman-Standard |
| | 50 | Caboose | 80,000 | 30 | .. | 47,000 | Dec. | Nov.-Dec. '67 | International Car |
| Chicago, Rock Island & Pacific | 10 | Caboose | ..... | 30 | .. | ..... | Jan. | Nov. | International Car |
| | 50 | Hopper | 140,000 | 57 | .. | 65,000 | Feb. | Aug. | Greenville Steel Car |
| | 6 | Dump | 154,000 | 33 | 11-1/4 | 66,000 | Mar. | Aug. | Difco, Inc. |
| | 200 | Box | 154,000 | 50 | .. | ..... | June | Dec. | Pullman-Standard |
| | 50 | Box | 200,000 | 60 | .. | 82,000 | June | Oct. | ACF |

# 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Cpaacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 25 | Caboose | ..... | 30 | .. | ..... | June | Nov. | International Car |
| | 6 | Dump | 154,000 | 33 | 11-1/4 | 66,000 | April | Dec. | Difco, Inc. |
| | 20 | Hoppers | 200,000 | .. | .. | 194,000 | Oct. | '66-'67 | ACF |
| | 10 | Flat | 140,000 | .. | .. | 80,000 | Dec. | June '67 | General Steel Ind. |
| | 50 | Flat | 140,000 | 53 | 6 | 72,000 | Dec. | May '67 | General Steel Ind. |
| | 50 | Flat | 180,000 | 65 | .. | 90,000 | Dec. | Aug. '67 | General Steel Ind. |
| | 1000 | Hopper | 200,000 | 50 | .. | 62,300 | Dec. | April '67 | Pullman-Standard |
| | 500 | Hopper | 200,000 | 36 | .. | 56,000 | Dec. | May '67 | ACF |
| | 300 | Ins. Box | 140,000 | 50 | .. | 82,000 | Dec. | Mar. '67 | GATX |
| | 75 | Caboose | ..... | 30 | .. | ..... | Dec. | July '67 | International Car |
| Clinchfield | 600 | Hopper | 160,000 | 40 | 8 | 54,500 | Feb. | Oct. | Greenville Steel Car |
| | 103 | Box | 154,000 | 50 | 6 | 62,800 | Mar. | Aug. | Fruit Growers Express |
| | 100 | Cov. Hopper | 200,000 | 41 | 1 | 59,500 | Oct. | Apr. '67 | Pullman-Standard |
| | 400 | Hopper | 160,000 | 40 | 8 | 54,500 | Oct. | Feb. '67 | Greenville Steel Car |
| Consolidation Coal Co | 186 | Gondola | 200,000 | 51 | 11 | 59,000 | Aug. | June-Aug. '67 | Greenville Steel Car |
| | 164 | Gondola | 200,000 | 51 | 11 | 60,000 | Apr. | Apr.-June '67 | Greenville Steel Car |
| | 96 | Gondola | 200,000 | 51 | 11 | 63,000 | Aug. | Nov.-Dec. '67 | Greenville Steel Car |
| Cuyahoga Valley | 20 | Gondola | 180,000 | 36 | 6 | 74,500 | June | Feb. '67 | Briggs & Turivas |
| | 20 | Gondola | 180,000 | 36 | 6 | 74,500 | Aug. | June '67 | Company Shops |
| Delaware & Hudson | 5 | Cov. Hopper | 200,000 | 38 | .. | 56,800 | Apr. | June | ACF |
| | 200 | Box | 140,000 | 50 | 6 | ..... | May | Jan. '67 | Pullman-Standard |
| Denver & Rio Grande Western | 15 | Caboose | ..... | 30 | 1 | 56,600 | May | Sept.-Oct. | International Car |
| | 350 | Box | 100,000 | 40 | 6 | 44,980 | Jan. | May-Sept. | U.S. Railway Equipment Co. |
| | 100 | Cov. Hopper | 200,000 | 49 | 6 | 62,000 | June | July '67 | Pullman-Standard |
| | 50 | Gondola | 140,000 | 65 | 6 | 62,000 | June | Jan. '67 | Bethlehem Steel |
| | 100 | Box | 140,000 | 50 | 6 | 64,500 | June | May '67 | GATX |
| | 100 | Box | 195,000 | 50 | 6 | 66,000 | June | May '67 | GATX |
| | 6 | Box | 134,000 | 60 | 9 | 78,000 | June | Nov.-Dec. | Pullman-Standard |
| | 7 | Box | 146,000 | 86 | 6 | 117,000 | Oct. | June '67 | Thrall |
| | 8 | Ins. Box | 157,500 | 60 | .. | 105,500 | Oct. | June '67 | CB&Q |
| Detroit Edison Co | 184 | Gondola | 200,000 | 60 | 9 | 60,500 | June | Feb.-Apr. '67 | Greenville Steel Car |
| E. I. du Pont de Nemours | 125 | Hopper | ..... | .. | .. | ..... | Feb. | Dec. | ..... |
| | 11 | Hopper | ..... | .. | .. | ..... | Mar. | Sep | ..... |
| | 55 | Hopper | ..... | .. | .. | ..... | Mar. | Nov. | ..... |
| | 30 | Tank | 200,000 | .. | .. | ..... | Apr. | Jan. '67 | GATX |
| | 10 | Hopper | ..... | .. | .. | ..... | May | June '67 | ..... |
| | 12 | Tank | 100,000 | .. | .. | ..... | May | Feb. '67 | GATX |
| | 8 | Tank | 250,000 | .. | .. | ..... | June | Mar. '67 | GATX |
| | 7 | Tank | 200,000 | .. | .. | ..... | June | Feb. '67 | GATX |
| | 27 | Tank | 200,000 | .. | .. | ..... | June | Mar. '67 | GATX |
| | 2 | Tank | 200,000 | .. | .. | ..... | June | Feb. '67 | GATX |
| | 85 | Hopper | ..... | .. | .. | ..... | July | June '67 | Magor Car |
| | 1 | Tank | 200,000 | .. | .. | ..... | Aug. | Apr. '67 | GATX |
| | 8 | Tank | 100,000 | .. | .. | ..... | Aug. | May '67 | GATX |
| | 4 | Container | ..... | .. | .. | ..... | Sept. | Oct. '67 | ..... |
| | 2 | Hopper | ..... | .. | .. | ..... | Sept. | Feb. '67 | ..... |
| | 75 | Tank | 300,000 | .. | .. | ..... | Nov. | Oct. '67-Mar. '68 | GATX |
| Erie Lackawanna | 50 | Cov. Hopper | 200,000 | .. | .. | 56,000 | Jan. | May & June | Pullman-Standard |
| | 55 | Cov. Hopper | 200,000 | .. | .. | 62,400 | Jan. | June | ACF |
| | 250 | Hopper | 140,000 | 40 | 7-3/4 | 54,000 | Jan. | June | Greenville Steel Car |
| | 50 | Coil Flat | 200,000 | 56 | .. | 67,700 | Feb. | Jan. & Feb. '67 | Greenville Steel Car |
| Fruit Growers Express | 466 | RBL | 140,000 | 50 | .. | 92,000 | May | 4th Quart.-1st Quart. '67 | Company Shops |
| | 200 | RPL | 140,000 | 52 | .. | 94,000 | Oct. | 2nd Quart. '67 | Company Shops |
| Genesee & Wyoming | 50 | Cov. Hopper | 200,000 | 38 | .. | 57,500 | Jan. | Mar. | ACF |
| Grand Trunk Western | 202 | Box | 140,000 | 60 | 9 | 71,700 | Mar. | Nov. | Pullman-Standard |
| | 50 | Box | 140,000 | 50 | 6 | ..... | Sept. | Apr. '67 | Pullman-Standard |
| | 34 | Box | 140,000 | 86 | 6 | ..... | Oct. | June '67 | Pullman-Standard |
| Great Northern | 25 | Flat | 70,000 | 53 | 6 | 71,700 | Apr. | June | General Steel Ind. |
| | 25 | Flat | 100,000 | 58 | 6 | 79,700 | Apr. | Sept. | Thrall Car |
| | 200 | Gondola | 70,000 | 52 | 6 | 59,300 | May | Aug. | Thrall Car |
| | 100 | Box | 77,000 | 50 | 6 | 71,000 | Feb. | Oct. | Pullman-Standard |
| | 45 | Flat | 70,000 | 60 | .. | 72,500 | May | Oct. | General Steel Ind. |
| | 25 | Flat | 100,000 | 60 | .. | 79,800 | May | Nov. | General Steel Ind. |
| | 5 | Flat | 100,000 | 70 | .. | 87,200 | Feb. | Sept. | Thrall Car |
| | 50 | Gondola | 95,000 | 65 | 6 | 70,700 | Mar. | Oct. | Gunderson Bros. |
| | 100 | Box | 70,000 | 52 | 6 | 79,000 | June | Dec. | Pacific Car & Foundry |
| | 100 | Box | 85,000 | 60 | 4 | 89,100 | June | Nov. | Pacific Car & Foundry |
| | 300 | Cov. Hopper | 100,000 | .. | .. | 62,700 | June | Nov. | ACF |
| | 30 | Flat | 90,000 | 53 | 6 | ..... | July | Dec. | General Steel Ind. |
| | 8 | Box | 70,000 | 60 | 9 | ..... | July | Dec. | Pullman-Standard |
| Green Bay & Western | 100 (Leased) | Box | 410,000 | 50 | .. | 67,000 | July | April '67 | Evans Products |
| | 1 | Caboose | 80,000 | 30 | .. | 43,600 | July | Dec. | International Car |
| Gulf, Mobile & Ohio | 1 | Auto Rack | ..... | 89 | .. | ..... | Jan. | June | Whitehead & Kales |
| | 4 | Box | 200,000 | 60 | .. | 75,000 | Mar. | Jan. '67 | Evans Products |
| | 31 | Caboose | ..... | .. | .. | ..... | April | '66-'67 | International Car |
| | 3 | Auto Rack | ..... | 89 | .. | ..... | April | June-July | Whitehead & Kales |
| | 300 | Box | 140,000 | 50 | 6 | 61,600 | April | Jan. '67 | Pullman-Standard |
| | 2 | Auto Rack | ..... | 89 | .. | ..... | May | Nov. | Whitehead & Kales |
| | 150 | Wood Chip | 140,000 | 56 | 1 | 65,000 | July | April '67 | Greenville Steel Car |
| | 2 | Box | 140,000 | 60 | 9 | ..... | Nov. | Aug. '67 | Pullman-Standard |
| | 2 | Auto Rack | ..... | 89 | .. | ..... | Nov.-Dec. | 1967 | Whitehead & Kales |
| Hooker Chemical | 50 | Tank | 150,500 | 35 | 1 | 69,500 | Nov. | ..... | Vancouver Iron & Eng. Works |
| | 7 | Tank | 140,000 | .. | .. | ..... | Feb. | July | GATX |
| | 5 | Tank | 140,000 | .. | .. | ..... | Feb. | Sept. | GATX |
| | 25 | Tank | 140,000 | .. | .. | ..... | Feb. | Aug. | GATX |
| | 8 | Tank | 200,000 | .. | .. | ..... | Aug. | Feb. '67 | GATX |
| | 4 | Tank | 140,000 | .. | .. | ..... | Sept. | June '67 | GATX |
| Illinois Central | 100 | Cov. Hopper | ..... | 48 | 11 | 70,700 | July | Oct. | GATX |
| | 500 | Cov. Hopper | ..... | 54 | 6 | 63,500 | Aug. | Dec. | GATX |
| | 100 | Ins. Box | 140,000 | 50 | 6 | 81,300 | Aug. | May '67 | GATX |
| | 200 | Box | 140,000 | 50 | 6 | 63,200 | Aug. | Apr. '67 | ACF |
| | 200 | Box | 140,000 | 50 | 6 | 63,200 | Sept. | Apr. '67 | Pullman-Standard |
| | 100 | Gondola | 200,000 | 65 | .. | ..... | Sept. | Feb. '67 | Bethlehem Steel |
| | 50 | Cov. Gondola | 200,000 | 62 | 6 | 80,000 | Sept. | Mar. '67 | Greenville Steel Car |
| | 25 | Coil | 200,000 | 48 | .. | 69,000 | Sept. | 3rd Quart. '67 | Evans Products |
| | 50 | Bulkhead Flat | 200,000 | 76 | 6 | ..... | Sept. | July '67 | Thrall Car |

# 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 200 | Bulkhead Flat | 200,000 | 70 | .. | ..... | Sept. | Jan. '67 | Evans Products |
| | 4 | Hi-Cube Box | 80,000 | 86 | 6 | 80,000 | Aug. | May '67 | Thrall Car |
| | 1000 | Pulpwood | 140,000 | 38 | .. | 44,100 | Sept. | Dec. | Company Shops |
| | 600 | Box | 140,000 | 50 | 6 | 63,200 | Sept. | Feb. '67 | Company Shops |
| | 1500 | Hoppers | 140,000 | 33 | .. | 47,900 | Sept. | May '67 | Company Shops |
| Illinois Terminal | 7 | Box | 140,000 | 50 | .. | 76,000 | May | Dec. | Evans Products |
| Kansas City Southern | 12 | Cov. Hopper | 250,000 | 44 | 9 | 71,800 | May | Oct. | ACF |
| | 210 | Cov. Hopper | 200,000 | 53 | 3 | 63,800 | Sept. | June '67 | ACF |
| | 10 | Cov. Hopper | 200,000 | 50 | 9 | ..... | May | Oct. | GATX |
| | 100 | Flat | 250,000 | 70 | 3 | ..... | Sept. | Apr.-May '67 | Pullman-Standard |
| | 200 | Flat | 250,000 | 70 | 3 | ..... | Sept. | Nov.-Dec. '67 | Pullman-Standard |
| | 100 | Hopper | 200,000 | 49 | 6 | ..... | Oct. | June '67 | Pullman-Standard |
| | 500 | Box | 200,000 | 50 | 6 | ..... | Oct. | May-June '67 | Pullman-Standard |
| | 300 | Box | 200,000 | 60 | 9 | ..... | Oct. | July '67 | Pullman-Standard |
| Louisville & Nashville | 150 | Pulpwd. | 140,000 | 45 | .. | 62,100 | May | Feb. '67 | ACF |
| | 700 | Gondola | 200,000 | 52 | 6 | 63,100 | June | Feb. '67 | Pullman-Standard |
| | 300 | Cov. Hopper | 200,000 | 41 | 1 | 67,500 | July | May '67 | Pullman-Standard |
| | 15 | Cov. Hopper | 200,000 | 48 | 11 | 72,900 | June | Oct. | GATX |
| | 500 | Hopper | 160,000 | 42 | 10 | 53,700 | Sept. | Apr. '67 | Pullman-Standard |
| | 400 | Box | 140,000 | 50 | 6 | 64,000 | June | Mar. '67 | Pullman-Standard |
| | 8 | Box | 140,000 | 86 | 6 | 114,600 | Dec. | May '67 | Thrall Car |
| | 50 | Hopper | 200,000 | 66 | 6 | 74,500 | July | Feb. '67 | Ortner |
| Maine Central | 200 | Box | 144,000 | 50 | 6 | 65,500 | Apr. | Feb.-Mar. '67 | ACF |
| | 5 | Box | 144,000 | 50 | 7-1/4 | ..... | June | Jan. '67 | Pacific Car & Foundry |
| Merchants Despatch Transportation Corp | 75 | Auto-Rack | 130,000 | 89 | .. | 66,800 | Feb. | June | Bethlehem-Whitehead & Kales |
| Minneapolis, Northfield & Southern | 10 | Box | 140,000 | 48 | 6 | 38,000 | May | Dec. | Gunderson Bros. |
| Mississippi Central | 50 | Bulkhead Flat | 140,000 | 54 | 2 | 52,000 | Mar. | Oct. | Thrall Car |
| Missouri-Kansas-Texas | 100 | Hopper | 200,000 | 43 | .. | 65,000 | Aug. | Dec.-Jan. '67 | Gunderson Bros. |
| | 31 | Airslide Hopper | 200,000 | 48 | 11 | 71,700 | May | Oct. | GATX |
| | 100 | Bulkhead Flat | 140,000 | 60 | .. | 63,000 | Sept. | June-July '67 | Evans Products |
| | 2 | Hopper | 140,000 | 41 | 2 | 57,700 | Sept. | Dec. | ACF |
| | | The following cars will be leased from United States Railway Equipment Co.: | | | | | | | |
| | 4 | Box | 140,000 | 60 | 9 | 77,000 | ..... | Mar.-Sept. | Evans Products |
| | 350 | Box | 140,000 | 50 | 6 | 68,000 | ..... | Mar.-Sept. | Evans Products |
| | 125 | Box | 140,000 | 50 | 6 | 67,000 | ..... | Mar.-Sept. | Evans Products |
| | 125 | Box | 140,000 | 50 | 6 | 69,000 | ..... | Mar.-Sept. | Evans Products |
| | 100 | Box | 140,000 | 60 | 9 | 78,000 | ..... | Mar.-Sept. | Evans Products |
| | 100 | Box | 140,000 | 60 | 9 | 76,000 | ..... | Mar.-Sept. | Evans Products |
| | 600 | Hopper | 200,000 | 45 | .. | 62,800 | Mar. | Feb.-June '67 | Gunderson Bros |
| | 5 | Gondola | 200,000 | 53 | 4 | 70,000 | ..... | Oct. | Evans Products. |
| Missouri-Illinois | 100 | Cov. Hopper | 200,000 | 34 | 9 | 54,800 | Sept. | July '67 | ACF |
| | 100 | Box | 200,000 | 60 | 8-1/2 | 74,900 | Sept. | July '67 | ACF |
| | 32 | Box | 200,000 | 60 | .. | 73,500 | Dec. | May-June '67 | ACF |
| Missouri Pacific | 6 | Hi-Cube Box | 100,000 | 86 | 6 | 113,000 | Aug. | Apr. '67 | Thrall Car |
| Monon | 3 | Tri-Level | 125,000 | 89 | .. | 94,300 | Feb. | Aug. | Pullman-Standard |
| | 40 | Cov. Hopper | 200,000 | 35 | .. | 57,000 | Feb. | June | Pullman-Standard |
| | 18 | Box | 140,000 | 50 | .. | 57,000 | May | Dec. | Pullman-Standard |
| | 15 | Cov. Hopper | 209,500 | 55 | .. | 53,500 | May | Apr. '67 | Magor Car Corp. |
| New York Central | 344 | Box | 140,000 | 60 | 9 | 92,900 | Mar. | July | Despatch Shops |
| | 142 | Box | 140,000 | 60 | 9 | 90,300 | Mar. | Sept. | Despatch Shops |
| | 126 | Box | 200,000 | 60 | 9 | 104,500 | Mar. | Oct. | Despatch Shops |
| | 46 | Box | 140,000 | 86 | 6 | 117,200 | Jan. | Aug. | Greenville Steel Car |
| | 30 | Box | 140,000 | 86 | 6 | 119,500 | Jan. | Aug. | Pullman-Standard |
| | 120 | Cov. Hopper | 250,000 | .. | .. | 68,900 | Jan. | June | ACF |
| | 1 | Cov. Hopper | 250,000 | .. | .. | 78,100 | June | June | Despatch Shops |
| | 5 | Cov. Hopper | 250,000 | .. | .. | 68,200 | Jan. | Oct. | B. F. Goodrich Co. |
| | 30 | Ins. Box | 140,000 | 50 | .. | ..... | Sept. | Mar. '67 | Fruit Growers Express |
| | 73 | Box | 200,000 | 60 | 9 | 110,200 | ..... | Nov. | Despatch Shops |
| | By Lease | | | | | | | | |
| | 45 | Box | 200,000 | 60 | 9 | 115,900 | ..... | Nov. | Despatch Shops |
| | 18 | Box | 200,000 | 60 | 9 | 93,700 | ..... | Nov. | Despatch Shops |
| | 4 | Box | 200,000 | 60 | 9 | 130,800 | ..... | Nov. | Despatch Shops |
| | 2 | Box | 200,000 | 60 | 9 | 130,100 | ..... | Nov. | Despatch Shops |
| | 100 | Box | 140,000 | 60 | 9 | ..... | ..... | Nov. | Despatch Shops |
| | 100 | Cov. Hopper | 200,000 | 60 | 7 | ..... | ..... | Dec. | ACF |
| | 150 | Ins. Box | 140,000 | 50 | 7 | ..... | ..... | Dec. | Despatch Shops |
| Norfolk Southern | 50 | Hopper | 140,000 | 39 | 10 | 53,600 | Jan. | June | Bethlehem Steel |
| | 20 | Hopper | 140,000 | 39 | 10 | 53,600 | Feb. | June | Bethlehem Steel |
| | 60 | Box | 100,000 | 50 | .. | 63,000 | July | Mar. '67 | Evans Products |
| | 15 | Flat | 180,000 | .. | .. | ..... | Aug. | 4th Qt. | Southern Iron & Equip. Co. |
| | 8 | Flat (Bulkhead) | 140,000 | 53 | 6 | 72,500 | May | Jan. '67 | General Steel Ind. |
| | 20 | Wood Chip | 140,000 | 56 | 9 | 64,600 | Feb. | Aug. | Greenville Steel Car |
| Norfolk & Western | 200 | Coil Steel Flat | 200,000 | 49 | .. | 66,200 | Feb. | Dec. '66-'67 | FMC Gunderson |
| | 3 | Dep. Flat | 250,000 | 21 | .. | 125,000 | May | Dec. | Thrall |
| | 200 | Cov. Hopper | 200,000 | 57 | .. | 66,600 | Feb. | Aug. | Pullman-Standard |
| | 1000 | Cov. Hopper | 200,000 | 54 | .. | 66,000 | May | April '67 | Company Shops |
| | 1000 | Hopper | 170,000 | 37 | .. | 51,400 | Jan. | Nov. '67 | Company Shops |
| | 1000 | Hopper | 190,000 | 45 | .. | 59,000 | Mar. | Sept. | Company Shops |
| | 2000 | Hopper | 190,000 | 45 | .. | 59,000 | July | Jan. '68 | Company Shops |
| North American Car | 876 | Tank | 100,000 to 200,000 | .. | .. | ..... | 1966 | 1967 | Company Shops |
| | 406 | Hopper | 200,000 | .. | .. | ..... | 1966 | 1967 | Company Shops |
| | 301 | Ins. Box | 140,000 | 50 | 1 | ..... | Jan.-Feb. | Mar.-Sept. | Company Shops |
| | 302 | Flat | ..... | 89 | .. | ..... | 1966 | 1967 | Whitehead & Kales |
| | 20 | Flat | ..... | 89 | .. | ..... | Jan. | May | ACF |
| | 150 | Hopper | 200,000 | .. | .. | ..... | 1966 | 1967 | ACF |
| | 500 | Cov. Hopper | ..... | .. | .. | ..... | Aug. | Feb. '67 | Thrall |
| | 613 | Hopper | 200,000 | .. | .. | ..... | 1966 | 1967 | Hawker-Siddeley, Canada |
| | 130 | Hopper | 200,000 | .. | .. | ..... | 1966 | 1967 | National Steel Car |
| | 13 | Hopper | ..... | .. | .. | ..... | Mar. | 1967 | Davie Shipbuilding |
| | 55 | Tank | 20,000 to 34,000 gal. | .. | .. | ..... | Mar.-Aug. | May-Sept. | Davie Shipbuilding |
| | 12 | Container | ..... | .. | .. | ..... | Apr. | 1967 | Camel Co., Ltd. |
| | 1 | Gondola | 140,000 | .. | .. | ..... | Apr. | 1967 | Canadian National Ry. |
| | 50 | Ins. Box | ..... | .. | .. | ..... | Apr. | Dec. | National Steel Car |
| | 32 | Tank | 20,000 gal | .. | .. | ..... | May-July | Jan. '67 | Hawker-Siddeley, Canada |
| | 2 | Ins. Box | ..... | .. | .. | ..... | June | 1967 | Hawker-Siddeley, Canada |
| Northern Pacific | 100 | Hopper | 200,000 | 53 | 4 | 62,100 | Jan. | Mar. '67 | Ortner |
| | 100 | Cov. Hopper | 200,000 | 49 | 6 | 61,700 | Jan. | Oct. | Pullman-Standard |
| | 6 | Box | 140,000 | 60 | 8 | ..... | Apr. | Dec. | Pullman-Standard |

## 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 50 | Cov. Hopper | 200,000 | 34 | 9 | 54,800 | Oct. | Mar. '67 | ACF |
| | 300 | Cov. Hopper | 200,000 | 49 | 6 | 62,000 | May | Apr. '67 | Pullman-Standard |
| | 250 | Flat | 140,000 | 53 | 6 | 61,600 | July | Jan. '68 | Company Shops |
| | 50 | Bulkhead Flat | 140,000 | 48 | 6 | 70,500 | July | Jan. '68 | Company Shops |
| | 100 | Mech. Refrig. | 134,000 | 50 | 9 | 86,000 | July | June '67 | Pacific Car & Foundry |
| | 2 | RBL Refrig. | 140,000 | 50 | 1 | ..... | July | Feb. '67 | Fruit Growers Express |
| | 10 | Bulkhead Flat | 200,000 | 48 | 6 | ..... | Sept. | Jan. '67 | General Steel Ind. |
| | 300 | Wood Chip | 200,000 | 59 | 2 | ..... | Oct. | Mar. '67 | Gunderson Bros. |
| Pacific Fruit Express | 250 | Flat | 140,000 | 89 | .. | 68,200 | April | July-Oct. | ACF |
| Peabody Coal Company | 160 | Gondola | 200,000 | 51 | 11 | 63,000 | Nov. | Sept.-Oct. '67 | Greenville Steel Car |
| Pennsylvania | 400 | Gondola | 200,000 | 52 | 6 | 62,500 | Feb. | Nov. | Company Shops |
| | 200 | Gondola | 200,000 | 52 | 6 | 61,900 | Sept. | Dec. | Company Shops |
| | 200 | Gondola | 140,000 | 65 | 6 | 68,900 | Feb. | Sept. | Company Shops |
| | 1000 | Hopper | 200,000 | 44 | 11 | 62,500 | Sept. | Mar. '67 | Company Shops |
| | 24 | Box | 140,000 | 86 | 6 | 119,600 | July | Mar. '67 | Thrall |
| | 4 | Box | 200,000 | 86 | 6 | ..... | Nov. | June '67 | Thrall |
| Pennsylvania Power & Light | 110 | Hopper | 200,000 | 45 | .. | 62,000 | July | Sept. | Bethlehem Steel |
| Pittsburgh & Lake Erie | 200 | Coil | 250,000 | 57 | .. | 166,000 | Mar. | Oct. '67 | Evans Products |
| | 50 | Flat | 140,000 | 53 | 6 | 60,000 | Mar. | Jan.-Feb. '67 | Greenville Steel Car |
| | 150 | Gondola | 200,000 | 52 | 6 | 77,500 | Mar. | Jan.-Mar. '67 | Greenville Steel Car |
| | 250 | Gondola | 140,000 | 65 | 6 | 75,400 | July | Mar.-Ap.. '67 | Greenville Steel Car |
| Reading | 450 | Gondola | 154,000 | 52 | 6 | 64,500 | Mar. | Aug.-Dec. | Company Shops |
| | 400 | Hopper | 200,000 | 45 | .. | 60,500 | June | Aug.-Feb. '67 | Company Shops |
| | 150 | Gondola | 154,000 | 65 | 10 | 56,000 | June | Jan.-Feb. '67 | Company Shops |
| | 50 | Box | 154,000 | 50 | 6 | 63,500 | June | Jan. '67 | Pullman-Standard |
| St. Louis-San Francisco | 300 | Cov. Hopper | 200,000 | 49 | 6 | 63,000 | June | May '67 | Pullman-Standard |
| | 100 | Hopper | 200,000 | 49 | 6 | 61,000 | July | May '67 | Pullman-Standard |
| | 150 | Ins. Box | 140,000 | 50 | 1 | 80,000 | July | June '67 | Evans Products |
| | 200 | Gondola | 200,000 | 52 | 6 | 68,000 | Aug. | June '67 | General Steel Ind. |
| | 30 | Wood Chip Hopper | 200,000 | 66 | 7 | 75,000 | Sept. | April '67 | Ortner |
| | 500 | Cov. Hopper | 200,000 | 49 | 6 | 63,000 | June | '67 | Pullman-Standard |
| St. Louis Southwestern | 100 | Cov. Hopper | 200,000 | 53 | 3 | 68,800 | Aug. | Oct.-Nov. | ACF |
| | 50 | Flat | 140,000 | 89 | .. | 66,500 | Mar. | July-Aug. | ACF |
| Seaboard Air Line | 100 | Hopper | 200,000 | .. | .. | 54,000 | Jan. | Dec.-Jan. '67 | Magor Car |
| | 235 | Box | 110,000 | 40 | 6 | 50,500 | Jan. | Nov.-Jan. '67 | Evans Products |
| | 500 | Hopper | 200,000 | .. | .. | 60,000 | Apr. | Feb.-Mar. '67 | Pullman-Standard |
| | 300 | Hopper | 200,000 | .. | .. | 63,000 | Apr. | Jan. '67 | Pullman-Standard |
| | 50 | Bulkhead Flat | 180,000 | 61 | .. | 82,000 | Apr. | Jan. '67 | Thrall Car |
| | 50 | Bulkhead Flat | 180,000 | 70 | .. | 87,500 | Apr. | Jan. '67 | Thrall Car |
| Shippers' Car Line | 3324 | Cov. Hopper | ..... | .. | .. | ..... | 1966 | '66-'67 | ACF |
| | 1488 | Tank | ..... | .. | .. | ..... | 1966 | '66-'67 | ACF |
| Soo Line | 10 | Cov. Gondola | 200,000 | 52 | 6 | ..... | Jan. | Oct. | Ortner |
| | 5 | Mill Gondola | 180,000 | 65 | 6 | ..... | Jan. | Dec.-Jan. '67 | Ortner |
| | 200 | Box | 140,000 | 50 | 6 | ..... | April | Feb.-April '67 | Company Shops |
| | 20 | Cov. Gondola | 200,000 | 52 | 6 | ..... | May | Jan. '67 | Thrall Car |
| | 25 | Triple Hopper | 200,000 | 45 | 0 | ..... | May | Dec. | Bethlehem Steel |
| | 50 | Gondola | 200,000 | 52 | 6 | ..... | May | Mar.-April '67 | Ortner |
| | 25 | RBL Box | 140,000 | 50 | 1 | ..... | April | Feb. '67 | Company Shops |
| | 10 | Flat | 140,000 | 89 | 0 | ..... | May | Feb. '67 | Bethlehem Steel |
| | 40 | Hopper | 200,000 | 43 | 0 | ..... | Sept. | Mar. '67 | Gunderson Bros. |
| | 500 | Hopper | 200,000 | 54 | 1 | ..... | June | April-Aug. '67 | Reynolds Alum. |
| | 20 | Caboose | ..... | .. | .. | ..... | April-Oct. | Sept.-Oct. | International Car |
| Southern | 1200 | Cov. Hopper | 200,000 | 46 | 6 | 63,000 | Feb. | Oct. '66-Mar '67 | Magor Car |
| | 800 | Hopper | 200,000 | 49 | .. | 68,000 | Feb. | Aug.-Oct. | Pullman-Standard |
| | 85 | Box | 140,000 | 60 | 9 | 82,700 | Sept. | July '67 | Pullman-Standard |
| | 500 | Cov. Hopper | 200,000 | 46 | 6 | 63,000 | Sept. | April-Aug. '67 | Magor Car |
| | 300 | Cov. Hopper | 200,000 | 45 | 5 | 63,000 | Sept. | Aug.-Sept. '67 | Pullman-Standard |
| Southern Pacific | 5071 | Various | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| Texas & Pacific | 400 | Cov. Hopper | 200,000 | 49 | 9-1/8 | 62,000 | Feb. | July | ACF |
| | 100 | Hi-Cube Box | 100,000 | 86 | 6 | 113,000 | Jan. | July | Thrall Car |
| | 1000 | Cov. Hopper | 200,000 | 48 | .. | 63,000 | Aug. | July '67 | Gunderson Bros. |
| Toledo, Peoria & Western | 40 | Cov. Hopper | 200,000 | .. | .. | ..... | Apr. | Jan. '67 | Pullman-Standard |
| | 5 | Ins. Box | 174,000 | 60 | .. | 89,000 | Nov. | May '67 | North American Car |
| Trailer Train | 1280 | Flat | 130,000 | 89 | .. | 75,000 | Jan.-Dec. | Jan.-Dec. | ACF |
| | 3332 | Flat | 130,000 | 89 | .. | 75,000 | Jan.-Dec. | Jan.-Dec. | Bethlehem Steel |
| | 3132 | Flat | 130,000 | 60-89 | .. | 67-150,000 | Jan.-Dec. | '66-'67 | Pullman-Standard |
| | 100 | Flat | 150,000 | 60 | .. | 67,000 | Nov. | Feb. '67 | Thrall |
| | 1 | Flat | 130,000 | 89 | .. | 75,000 | Mar. | Feb. '67 | GATX |
| Transport Leasing | 495 | Cov. Hopper | 200,000 | .. | .. | 62,000 | 1966 | 1967 | Pullman-Standard |
| | 1500 | Cov. Hopper | 200,000 | .. | .. | 62,000 | 1966 | 1967 | Pullman-Standard |
| Union Pacific | 10 | Coil | 180,000 | 89 | .. | ..... | Jan. | Apr. | Evans Prdoucts |
| | 125 | Flat | 140,000 | 89 | .. | ..... | Feb. | Aug.-Oct. | ACF |
| | 15 | Flat | 140,000 | 50 | 6 | ..... | Apr. | Aug. | Whitehead & Kales |
| | 500 | Box | 140,000 | 50 | 6 | ..... | Apr. | Jan. '67 | ACF |
| | 500 | Box | 140,000 | 50 | 6 | ..... | Apr. | Dec. | Pullman-Standard |
| | 750 | Cov. Hopper | 180,000 | .. | .. | ..... | Apr. | Feb.-Mar. '67 | Pullman-Standard |
| | 750 | Cov. Hopper | 180,000 | .. | .. | ..... | Apr. | May-Aug. '67 | Gunderson Bros. |
| | 500 | Ins. Box | 140,000 | 50 | 1 | ..... | Apr. | Jan. '67 | GATX |
| | 200 | Hopper | 180,000 | .. | .. | ..... | Apr. | Dec. | Bethlehem Steel |
| | 100 | Caboose | ..... | .. | .. | ..... | Apr. | Jan. '67 | International Car |
| | 500 | Mech. Reefer | 140,000 | .. | .. | ..... | Apr. | Jan.-Mar. '67 | Pacific Car & Foundry |
| | 100 | Hopper | 180,000 | .. | .. | ..... | June | July '67 | Transco |
| | 1 | Flat | 140,000 | 42 | .. | ..... | July | Nov. | St. Paul Foundry & Manufacturing |
| | 10 | Box | 140,000 | 86 | 6 | ..... | Aug. | Apr. '67 | Thrall |
| | 28 | Box | 140,000 | 50 | 6 | ..... | Sept. | Apr. '67 | Pacific Car & Foundry |
| | 200 | Flat | 140,000 | 53 | 6 | ..... | Apr.-June | Aug.-Dec. '67 | Company Shops |
| | 100 | Ins. Box | 180,000 | 60 | 4 | ..... | Apr.-June | July-Aug. '67 | Company Shops |
| | 200 | Box | 180,000 | 60 | 9 | ..... | Apr.-June | Apr.-June '67 | Company Shops |
| | 200 | Box | 140,000 | 50 | 6 | ..... | Apr.-June | Jan.-Mar. '67 | Company Shops |
| | 100 | Stock | 80,000 | 40 | 6 | ..... | Apr.-June | Sept.-Oct. '67 | Company Shops |
| | 2000 | Box | 100,000 | 40 | 6 | ..... | Apr.-June | Jan.-Dec. '67 | Company Shops |
| | 100 | Wood Chip | 180,000 | .. | .. | ..... | Apr.-June | May-June '67 | Company Shops |
| Various Industrial Orders | 643 | Cov. Hopper | 140-200,000 | .. | .. | ..... | 1966 | 1967 | Various |
| | 424 | Gondola | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| | 2955 | Tank | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| | 3 | Special | 140,000 | 60 | .. | ..... | Jan-June | June-July | Thrall Car |
| | 100 | Ore | 200,000 | .. | .. | 55,000 | Nov. | Apr.-May '67 | ACF |
| | 1 | Caboose | 70,000 | 30 | .. | 48,400 | May | Oct. | International Car |
| | 60 | Box | 140,000 | .. | .. | ..... | 1966 | 1967 | Various |
| | 25 | Crop | 140,000 | 31 | 9-1/2 | 68,400 | Nov. | Nov.-Dec. | Bethlehem Steel |



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## 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | RBL | 140,000 | 50 | 1 | ..... | June-Ap | Apr. '67 | GATX |
| | 2 | Flat | ..... | .. | .. | ..... | Jan. | June | Thrall Car |
| Western Fruit Express | 200 | RPL | 140,000 | 56 | .. | 90,000 | Dec. | 3rd Quart. '67 | Pacific Car & Foundry |
| Western Maryland | 50 | Box | 140,000 | 50 | 6 | 66,000 | Mar. | Dec. | Pullman-Standard |
| | 75 | Gondola | 200,000 | 52 | 6 | 66,900 | Sept. | Jan. '67 | Bethlehem Steel |
| | 25 | Gondola | 140,000 | 65 | 6 | 75,000 | Sept. | Apr. '67 | Greenville Steel Car |
| | 50 | Cov. Hopper | 200,000 | 54 | 6-9/16 | 64,500 | Sept. | Apr. '67 | Pullman-Standard |
| | 3 | Wood Chip | 200,000 | 66 | 6-5/8 | 74,300 | Sept. | Apr. '67 | Ortner |
| | 50 | Box | 140,000 | 50 | 6-1/16 | 61,100 | Oct. | Apr. '67 | ACF |
| | 10 | Box | 140,000 | 60 | 9 | 87,100 | Nov. | July '67 | ACF |
| Western Pacific | 50 | Center Flow | 200,000 | .. | .. | ..... | Nov. | Apr. '67 | ACF |
| | 6 | Box | 200,000 | .. | .. | ..... | Nov. | May '67 | Thrall |
| | 6 | Ins. Box | 200,000 | .. | .. | ..... | Nov. | June '67 | CB&Q |
| | 225 | Ins. Box | 140,000 | .. | .. | ..... | Jan. | Sept. | Pacific Car & Foundry |
| | 25 | Cov. Hopper | 200,000 | .. | .. | ..... | Feb. | Late '66 | Magor Car |
| | 5 | High Cube | 140,000 | .. | .. | ..... | Jan. | Nov. | Pacific Car & Foundry |
| | 5 | Cov. Hopper | 200,000 | .. | .. | ..... | July | Nov. | GATX |

## 1966 FREIGHT-TRAIN CAR ORDERS—CANADA

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| Canadian National | 400 | Newsprint | 140,000 | 50 | 6 | 54,000 | Mar. | Dec. | National Steel Car |
| | 400 | Newsprint | 140,000 | 50 | 6 | 54,000 | July | Feb. '67 | National Steel Car |
| | 700 | Cyl. Hopper | 200,000 | 50 | 6 | 60,000 | June | Jan. '67 | National Steel Car |
| | 2 | Flat (Dep. Cen.) | 360,000 | 64 | 6 | 164,000 | July | May '67 | National Steel Car |
| | 350 | Gondola | 180,000 | 52 | 6 | ..... | May | Dec. | Hawker-Siddeley, Canada |
| | 250 | Quad. Hopper | 200,000 | 39 | 10 | 55,000 | June | Feb. '67 | Hawker-Siddeley, Canada |
| | 150 | Caboose | ..... | 34 | 4 | ..... | May | July '67 | Hawker-Siddeley, Canada |
| | 25 | Coil | 180,000 | 48 | .. | ..... | Mar. | Dec. | Int'l Equipment Co. |
| | 100 | Flat | 140,000 | 54 | 4 | 49,600 | Oct. | Feb. '67 | Int'l Equipment Co. |
| | 200 | Flat (Bulkhead) | 140,000 | 51 | 6 | 57,000 | Apr. | Dec. '67 | Marine Industries |
| | 100 | Cov. Hopper | 140,000 | 53 | 5 | 58,000 | May | Jan. '67 | Vancouver Iron & Eng. Works |
| | 400 | Cyl. Hopper | 200,000 | 50 | 6 | 60,000 | Dec. '65 | Dec. | Marine Industries |
| Canadian Pacific | 20 | Hopper | 205,800 | 37 | 4 | 57,200 | Jan. | Oct.-Nov. | National Steel Car |
| | 200 | Ins. Box | 135,700 | 50 | 6 | 84,300 | Jan. | Sept.-Nov. | National Steel Car |
| | 100 | Ins. Box | 142,700 | 50 | 6 | 77,300 | Jan. | Sept.-Nov. | National Steel Car |
| | 500 | Cov. Hopper | 206,900 | 48 | .. | 56,100 | May | Jan.-Apr. '67 | Marine Industries |
| | 500 | Gondola | 201,800 | 52 | 6 | 61,200 | Aug. | July-Sept. '67 | Hawker-Siddeley, Canada |
| | 50 | Gondola | 197,400 | 52 | 6 | 65,600 | Aug. | Oct. '67 | Hawker-Siddeley, Canada |
| | 100 | Bulkhead Flat | 159,400 | 56 | 6 | 60,600 | July | May '67 | Marine Industries |
| | 135 | Flat | 200,000 | 61 | .. | 63,000 | Sept. | Feb.-Apr. '67 | Int'l Equipment Co. |
| | 150 | Mech. Refrig. | 136,000 | 50 | 8 | 84,000 | Oct. | May-June '67 | National Steel Car |
| | 250 | Newsprint | 140,000 | 50 | 6 | 60,000 | Oct. | Mar.-Apr. '67 | National Steel Car |
| Pacific Great Eastern | 75 | Wood Chip | 165,000 | 60 | .. | ..... | Dec. '65 | Oct.-Dec. | Vancouver Iron & Eng. Works |
| | 150 | Log | 174,000 | 60 | .. | ..... | Apr. | Sept.-Oct. | National Steel Car |
| Ontario Northland | 100 | Gondola | 200,000 | 52 | 6 | 63,000 | May | Jan. '67 | Hawker-Siddeley, Canada |

## 1966 LOCOMOTIVE ORDERS

| Purchaser | No. | Wheel Arrange-ment | Service | Weight Lb. | Horse-power | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|
| Alaska Railroad | 1 | C-C | GP | 343,000 | 3,000 | Nov. | Apr. '67 | Subject to bid evaluation |
| Atchison, Topeka & Santa Fe | 10 | B-B | Pass. | 346,000 | 2,800 | Feb. | July-Sept. | General Electric |
| | 30 | ... | GP | 388,000 | 3,600 | Feb. | June-Sept. | EMD |
| | 20 | ... | GP | 388,000 | 3,000 | Feb. | Apr.-May | EMD |
| | 60 | ... | GP | 388,000 | 3,600 | July | Oct.-Dec. | EMD |
| Atlanta & Saint Andrews Bay | 1 | C-C | Frt. | 384,000 | 3,000 | Jan. | June | EMD |
| Atlantic Coast Line | 10 | C-C | Frt. | ..... | 3,600 | Mar. | Dec. | EMD |
| | 4 | C-C | Frt. | 331,100 | 3,000 | Mar. | Nov. | General Electric |
| | 15 | B-B | Frt. | ..... | 3,000 | May | Dec. | EMD |
| | 4 | B-B | Frt. | ..... | 3,000 | Aug. | Feb. '67 | General Electric |
| Baltimore & Ohio | 16 | B-B | Gen. Pur. | 277,000 | 3,000 | July | Nov. | EMD |
| Bangor and Aroostook | 3 | B-B | GP | 260,090 | 2,000 | July | Mar. '67 | EMD |
| Belt Railway of Chicago | 3 | B-B | GP | 271,600 | 2,400 | Mar. | May | Alco |
| Chesapeake & Ohio | 20 | C-C | Gen. Pur. | 389,650 | 3,000 | Jan. | July-Sept. | EMD |
| Chicago, Burlington & Quincy | 10 | B-B | Road-Frt. | 273,547 | 2,800 | Aug. | Oct.-Dec. | General Electric |
| | 10 | B-B | Road-Frt. | 273,547 | 2,800 | Aug. | Nov.-Dec. | General Electric |
| | 20 | B-B | Road-Frt. | ..... | 3,000 | Aug. | Dec. | EMD |
| Chicago Great Western | 9 | C-C | Frt. | 366,170 | 3,000 | Apr. | Sept. | EMD |
| Chicago, Milwaukee, St. Paul & Pacific | 14 | B-B | Gen. Pur. | 256,000 | 3,000 | May | Oct. | EMD |
| | 6 | B-B | Gen. Pur. | 260,000 | 2,800 | June | July | General Electric |
| | 21 | B-B | Gen. Pur. | 256,000 | 3,000 | Sept. | Jan. | EMD |
| | 4 | B-B | Gen. Pur. | 252,000 | 2,800 | Sept. | Nov.-Dec. | General Electric |
| Chicago, Rock Island & Pacific | 10 | B-B | Sw. | 248,000 | 1,500 | April | July | EMD |
| | 5 | B-B | Sw. | 240,000 | 1,500 | Mar. | Aug. | Alco |
| | 10 | B-B | Frt. | 252,000 | 2,800 | Jan. | April | General Electric |
| | 10 | ... | Frt. | 252,000 | 2,800 | May | Aug. | General Electric |
| | 2 | ... | Frt. | 252,000 | 2,800 | June | Aug.-Oct. | General Electric |
| | 20 | ... | Gen. Pur. | 256,000 | 3,000 | June | Sept.-Oct. | EMD |
| | 2 | ... | Gen. Pur. | 256,000 | 3,000 | June | Sept. | EMD |
| | 5 | ... | Sw. | 240,000 | 1,500 | June | Nov. | Alco |
| | 12 | ... | Gen. Pur. | 256,000 | 3,000 | Aug. | Dec. | EMD |
| | 8 | ... | Gen. Pur. | 256,000 | 3,000 | Aug. | Jan. '67 | EMD |
| | 20 | ... | Frt. | 252,000 | 2,800 | Aug. | Dec. | General Electric |
| Chicago & North Western | 20 | C-C | Road-Sw. | 386,000 | 3,600 | July | Feb.-Mar. '67 | EMD |
| | 1 | C-C | Road-Sw. | 386,000 | 3,000 | Aug. | Sept. | EMD |
| | 4 | B-B | Road-Sw. | 256,000 | 2,500 | Aug. | Dec. | Alco |
| | 3 | C-C | Road-Sw. | 386,000 | 3,000 | Sept. | Jan. '67 | EMD |
| Clinchfield | 8 | C-C | Frt. | 390,000 | 3,000 | May | Sept.-Oct. | EMD |
| | 10 | B-B | GP | 265,500 | 2,000 | Nov. | Apr. '67 | EMD |



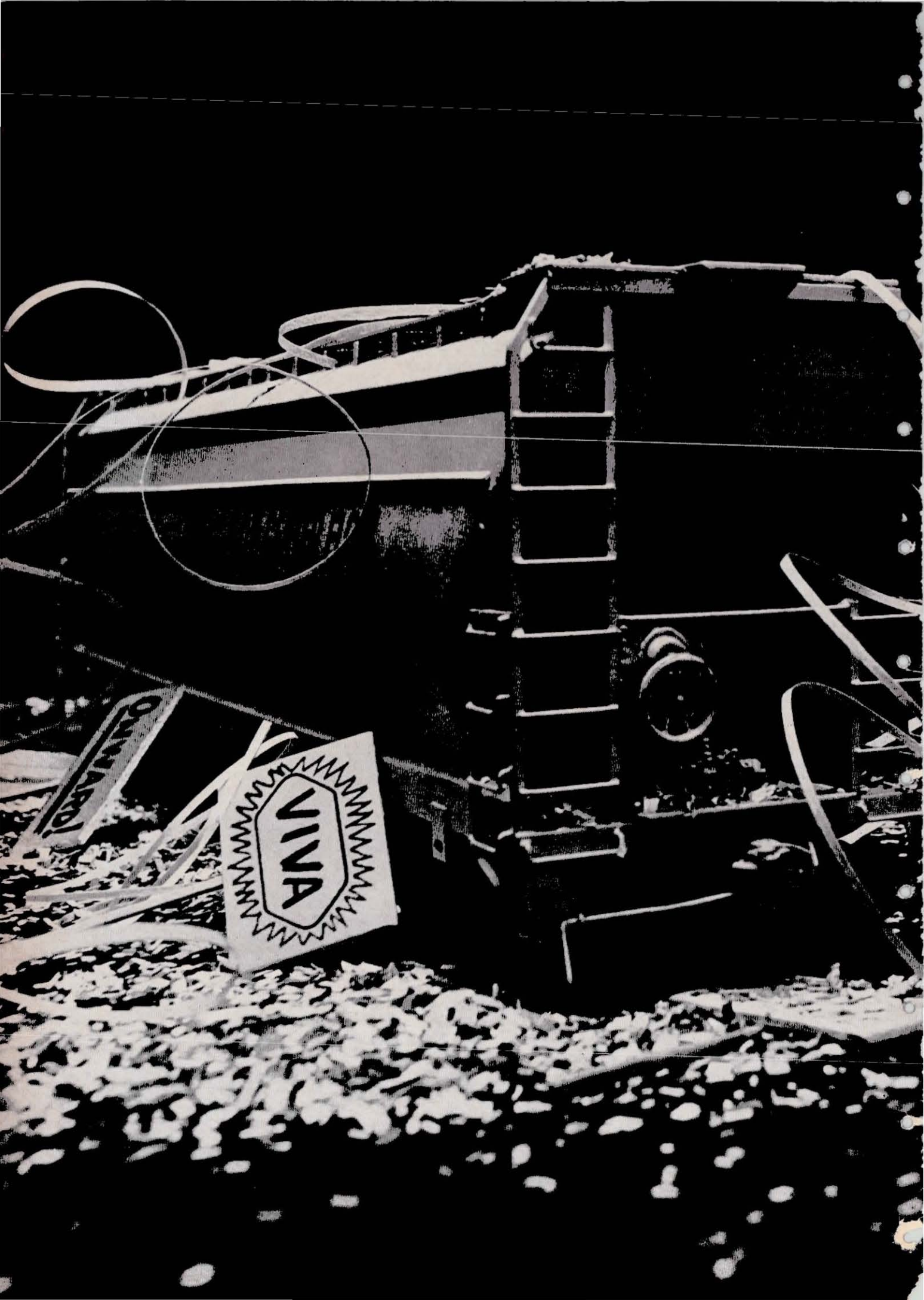
(Continued on page 115)

## 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 50 | Cov. Hopper | 200,000 | 34 | 9 | 54,800 | Oct. | Mar. '67 | ACF |
| | 300 | Cov. Hopper | 200,000 | 49 | 6 | 62,000 | May | Apr. '67 | Pullman-Standard |
| | 250 | Flat | 140,000 | 53 | 6 | 61,600 | July | Jan. '68 | Company Shops |
| | 50 | Bulkhead Flat | 140,000 | 48 | 6 | 70,500 | July | Jan. '68 | Company Shops |
| | 100 | Mech. Refrig. | 134,000 | 50 | 9 | 86,000 | July | June '67 | Pacific Car & Foundry |
| | 2 | RBL Refrig. | 140,000 | 50 | 1 | ..... | July | Feb. '67 | Fruit Growers Express |
| | 10 | Bulkhead Flat | 200,000 | 48 | 6 | ..... | Sept. | Jan. '67 | General Steel Ind. |
| | 300 | Wood Chip | 200,000 | 59 | 2 | ..... | Oct. | Mar. '67 | Gunderson Bros. |
| Pacific Fruit Express | 250 | Flat | 140,000 | 89 | .. | 68,200 | April | July-Oct. | ACF |
| Peabody Coal Company | 160 | Gondola | 200,000 | 51 | 11 | 63,000 | Nov. | Sept.-Oct. '67 | Greenville Steel Car |
| Pennsylvania | 400 | Gondola | 200,000 | 52 | 6 | 62,500 | Feb. | Nov. | Company Shops |
| | 200 | Gondola | 200,000 | 52 | 6 | 61,900 | Sept. | Dec. | Company Shops |
| | 200 | Gondola | 140,000 | 65 | 6 | 68,900 | Feb. | Sept. | Company Shops |
| | 1000 | Hopper | 200,000 | 44 | 11 | 62,500 | Sept. | Mar. '67 | Company Shops |
| | 24 | Box | 140,000 | 86 | 6 | 119,600 | July | Mar. '67 | Thrall |
| | 4 | Box | 200,000 | 86 | 6 | ..... | Nov. | June '67 | Thrall |
| Pennsylvania Power & Light | 110 | Hopper | 200,000 | 45 | .. | 62,000 | July | Sept. | Bethlehem Steel |
| Pittsburgh & Lake Erie | 200 | Coil | 250,000 | 57 | .. | 166,000 | Mar. | Oct. '67 | Evans Products |
| | 50 | Flat | 140,000 | 53 | 6 | 60,000 | Mar. | Jan.-Feb. '67 | Greenville Steel Car |
| | 150 | Gondola | 200,000 | 52 | 6 | 77,500 | Mar. | Jan.-Mar. '67 | Greenville Steel Car |
| | 250 | Gondola | 140,000 | 65 | 6 | 75,400 | July | Mar.-Ap.. '67 | Greenville Steel Car |
| Reading | 450 | Gondola | 154,000 | 52 | 6 | 64,500 | Mar. | Aug.-Dec. | Company Shops |
| | 400 | Hopper | 200,000 | 45 | .. | 60,500 | June | Aug.-Feb. '67 | Company Shops |
| | 150 | Gondola | 154,000 | 65 | 10 | 56,000 | June | Jan.-Feb. '67 | Company Shops |
| | 50 | Box | 154,000 | 50 | 6 | 63,500 | June | Jan. '67 | Pullman-Standard |
| St. Louis-San Francisco | 300 | Cov. Hopper | 200,000 | 49 | 6 | 63,000 | June | May '67 | Pullman-Standard |
| | 100 | Hopper | 200,000 | 49 | 6 | 61,000 | July | May '67 | Pullman-Standard |
| | 150 | Ins. Box | 140,000 | 50 | 1 | 80,000 | July | June '67 | Evans Products |
| | 200 | Gondola | 200,000 | 52 | 6 | 68,000 | Aug. | June '67 | General Steel Ind. |
| | 30 | Wood Chip Hopper | 200,000 | 66 | 7 | 75,000 | Sept. | April '67 | Ortner |
| | 500 | Cov. Hopper | 200,000 | 49 | 6 | 63,000 | June | '67 | Pullman-Standard |
| St. Louis Southwestern | 100 | Cov. Hopper | 200,000 | 53 | 3 | 68,800 | Aug. | Oct.-Nov. | ACF |
| | 50 | Flat | 140,000 | 89 | .. | 66,500 | Mar. | July-Aug. | ACF |
| Seaboard Air Line | 100 | Hopper | 200,000 | .. | .. | 54,000 | Jan. | Dec.-Jan. '67 | Magor Car |
| | 235 | Box | 110,000 | 40 | 6 | 50,500 | Jan. | Nov.-Jan. '67 | Evans Products |
| | 500 | Hopper | 200,000 | .. | .. | 60,000 | Apr. | Feb.-Mar. '67 | Pullman-Standard |
| | 300 | Hopper | 200,000 | .. | .. | 63,000 | Apr. | Jan. '67 | Pullman-Standard |
| | 50 | Bulkhead Flat | 180,000 | 61 | .. | 82,000 | Apr. | Jan. '67 | Thrall Car |
| | 50 | Bulkhead Flat | 180,000 | 70 | .. | 87,500 | Apr. | Jan. '67 | Thrall Car |
| Shippers' Car Line | 3324 | Cov. Hopper | ..... | .. | .. | ..... | 1966 | '66-'67 | ACF |
| | 1488 | Tank | ..... | .. | .. | ..... | 1966 | '66-'67 | ACF |
| Soo Line | 10 | Cov. Gondola | 200,000 | 52 | 6 | ..... | Jan. | Oct. | Ortner |
| | 5 | Mill Gondola | 180,000 | 65 | 6 | ..... | Jan. | Dec.-Jan. '67 | Ortner |
| | 200 | Box | 140,000 | 50 | 6 | ..... | April | Feb.-April '67 | Company Shops |
| | 20 | Cov. Gondola | 200,000 | 52 | 6 | ..... | May | Jan. '67 | Thrall Car |
| | 25 | Triple Hopper | 200,000 | 45 | 0 | ..... | May | Dec. | Bethlehem Steel |
| | 50 | Gondola | 200,000 | 52 | 6 | ..... | May | Mar.-April '67 | Ortner |
| | 25 | RBL Box | 140,000 | 50 | 1 | ..... | April | Feb. '67 | Company Shops |
| | 10 | Flat | 140,000 | 89 | 0 | ..... | May | Feb. '67 | Bethlehem Steel |
| | 40 | Hopper | 200,000 | 43 | 0 | ..... | Sept. | Mar. '67 | Gunderson Bros. |
| | 500 | Hopper | 200,000 | 54 | 1 | ..... | June | April-Aug. '67 | Reynolds Alum. |
| | 20 | Caboose | ..... | .. | .. | ..... | April-Oct. | Sept.-Oct. | International Car |
| Southern | 1200 | Cov. Hopper | 200,000 | 46 | 6 | 63,000 | Feb. | Oct. '66-Mar '67 | Magor Car |
| | 800 | Hopper | 200,000 | 49 | .. | 68,000 | Feb. | Aug.-Oct. | Pullman-Standard |
| | 85 | Box | 140,000 | 60 | 9 | 82,700 | Sept. | July '67 | Pullman-Standard |
| | 500 | Cov. Hopper | 200,000 | 46 | 6 | 63,000 | Sept. | April-Aug. '67 | Magor Car |
| | 300 | Cov. Hopper | 200,000 | 45 | 5 | 63,000 | Sept. | Aug.-Sept. '67 | Pullman-Standard |
| Southern Pacific | 5071 | Various | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| Texas & Pacific | 400 | Cov. Hopper | 200,000 | 49 | 9-1/8 | 62,000 | Feb. | July | ACF |
| | 100 | Hi-Cube Box | 100,000 | 86 | 6 | 113,000 | Jan. | July | Thrall Car |
| | 1000 | Cov. Hopper | 200,000 | 48 | .. | 63,000 | Aug. | July '67 | Gunderson Bros. |
| Toledo, Peoria & Western | 40 | Cov. Hopper | 200,000 | .. | .. | ..... | Apr. | Jan. '67 | Pullman-Standard |
| | 5 | Ins. Box | 174,000 | 60 | .. | 89,000 | Nov. | May '67 | North American Car |
| Trailer Train | 1280 | Flat | 130,000 | 89 | .. | 75,000 | Jan.-Dec. | Jan.-Dec. | ACF |
| | 3332 | Flat | 130,000 | 89 | .. | 75,000 | Jan.-Dec. | Jan.-Dec. | Bethlehem Steel |
| | 3132 | Flat | 130,000 | 60-89 | .. | 67-150,000 | Jan.-Dec. | '66-'67 | Pullman-Standard |
| | 100 | Flat | 150,000 | 60 | .. | 67,000 | Nov. | Feb. '67 | Thrall |
| | 1 | Flat | 130,000 | 89 | .. | 75,000 | Mar. | Feb. '67 | GATX |
| Transport Leasing | 495 | Cov. Hopper | 200,000 | .. | .. | 62,000 | 1966 | 1967 | Pullman-Standard |
| | 1500 | Cov. Hopper | 200,000 | .. | .. | 62,000 | 1966 | 1967 | Pullman-Standard |
| Union Pacific | 10 | Coil | 180,000 | 89 | .. | ..... | Jan. | Apr. | Evans Prdoucts |
| | 125 | Flat | 140,000 | 89 | .. | ..... | Feb. | Aug.-Oct. | ACF |
| | 15 | Flat | 140,000 | 50 | 6 | ..... | Apr. | Aug. | Whitehead & Kales |
| | 500 | Box | 140,000 | 50 | 6 | ..... | Apr. | Jan. '67 | ACF |
| | 500 | Box | 140,000 | 50 | 6 | ..... | Apr. | Dec. | Pullman-Standard |
| | 750 | Cov. Hopper | 180,000 | .. | .. | ..... | Apr. | Feb.-Mar. '67 | Pullman-Standard |
| | 750 | Cov. Hopper | 180,000 | .. | .. | ..... | Apr. | May-Aug. '67 | Gunderson Bros. |
| | 500 | Ins. Box | 140,000 | 50 | 1 | ..... | Apr. | Jan. '67 | GATX |
| | 200 | Hopper | 180,000 | .. | .. | ..... | Apr. | Dec. | Bethlehem Steel |
| | 100 | Caboose | ..... | .. | .. | ..... | Apr. | Jan. '67 | International Car |
| | 500 | Mech. Reefer | 140,000 | .. | .. | ..... | Apr. | Jan.-Mar. '67 | Pacific Car & Foundry |
| | 100 | Hopper | 180,000 | .. | .. | ..... | June | July '67 | Transco |
| | 1 | Flat | 140,000 | 42 | .. | ..... | July | Nov. | St. Paul Foundry & Manufacturing |
| | 10 | Box | 140,000 | 86 | 6 | ..... | Aug. | Apr. '67 | Thrall |
| | 28 | Box | 140,000 | 50 | 6 | ..... | Sept. | Apr. '67 | Pacific Car & Foundry |
| | 200 | Flat | 140,000 | 53 | 6 | ..... | Apr.-June | Aug.-Dec. '67 | Company Shops |
| | 100 | Ins. Box | 180,000 | 60 | 4 | ..... | Apr.-June | July-Aug. '67 | Company Shops |
| | 200 | Box | 180,000 | 60 | 9 | ..... | Apr.-June | Apr.-June '67 | Company Shops |
| | 200 | Box | 140,000 | 50 | 6 | ..... | Apr.-June | Jan.-Mar. '67 | Company Shops |
| | 100 | Stock | 80,000 | 40 | 6 | ..... | Apr.-June | Sept.-Oct. '67 | Company Shops |
| | 2000 | Box | 100,000 | 40 | 6 | ..... | Apr.-June | Jan.-Dec. '67 | Company Shops |
| | 100 | Wood Chip | 180,000 | .. | .. | ..... | Apr.-June | May-June '67 | Company Shops |
| Various Industrial Orders | 643 | Cov. Hopper | 140-200,000 | .. | .. | ..... | 1966 | 1967 | Various |
| | 424 | Gondola | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| | 2955 | Tank | ..... | .. | .. | ..... | 1966 | 1967 | Various |
| | 3 | Special | 140,000 | 60 | .. | ..... | Jan-June | June-July | Thrall Car |
| | 100 | Ore | 200,000 | .. | .. | 55,000 | Nov. | Apr.-May '67 | ACF |
| | 1 | Caboose | 70,000 | 30 | .. | 48,400 | May | Oct. | International Car |
| | 60 | Box | 140,000 | .. | .. | ..... | 1966 | 1967 | Various |
| | 25 | Crop | 140,000 | 31 | 9-1/2 | 68,400 | Nov. | Nov.-Dec. | Bethlehem Steel |



(Continued on page 110)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## 1966 FREIGHT-TRAIN CAR ORDERS (Continued)

| Purchaser | No. | Type | Capacity | Length Ft. | Length In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | RBL | 140,000 | 50 | 1 | ..... | June-Ap | Apr. '67 | GATX |
| | 2 | Flat | ..... | .. | .. | ..... | Jan. | June | Thrall Car |
| Western Fruit Express | 200 | RPL | 140,000 | 56 | .. | 90,000 | Dec. | 3rd Quart. '67 | Pacific Car & Foundry |
| Western Maryland | 50 | Box | 140,000 | 50 | 6 | 66,000 | Mar. | Dec. | Pullman-Standard |
| | 75 | Gondola | 200,000 | 52 | 6 | 66,900 | Sept. | Jan. '67 | Bethlehem Steel |
| | 25 | Gondola | 140,000 | 65 | 6 | 75,000 | Sept. | Apr. '67 | Greenville Steel Car |
| | 50 | Cov. Hopper | 200,000 | 54 | 6-9/16 | 64,500 | Sept. | Apr. '67 | Pullman-Standard |
| | 3 | Wood Chip | 200,000 | 66 | 6-5/8 | 74,300 | Sept. | Apr. '67 | Ortner |
| | 50 | Box | 140,000 | 50 | 6-1/16 | 61,100 | Oct. | Apr. '67 | ACF |
| | 10 | Box | 140,000 | 60 | 9 | 87,100 | Nov. | July '67 | ACF |
| Western Pacific | 50 | Center Flow | 200,000 | .. | .. | ..... | Nov. | Apr. '67 | ACF |
| | 6 | Box | 200,000 | .. | .. | ..... | Nov. | May '67 | Thrall |
| | 6 | Ins. Box | 200,000 | .. | .. | ..... | Nov. | June '67 | CB&Q |
| | 225 | Ins. Box | 140,000 | .. | .. | ..... | Jan. | Sept. | Pacific Car & Foundry |
| | 25 | Cov. Hopper | 200,000 | .. | .. | ..... | Feb. | Late '66 | Magor Car |
| | 5 | High Cube | 140,000 | .. | .. | ..... | Jan. | Nov. | Pacific Car & Foundry |
| | 5 | Cov. Hopper | 200,000 | .. | .. | ..... | July | Nov. | GATX |

## 1966 FREIGHT-TRAIN CAR ORDERS—CANADA

| Purchaser | No. | Type | Capacity | Length* Ft. | Length* In. | Weight | Ordered | Date Delivery | Builder |
|---|---|---|---|---|---|---|---|---|---|
| Canadian National | 400 | Newsprint | 140,000 | 50 | 6 | 54,000 | Mar. | Dec. | National Steel Car |
| | 400 | Newsprint | 140,000 | 50 | 6 | 54,000 | July | Feb. '67 | National Steel Car |
| | 700 | Cyl. Hopper | 200,000 | 50 | 6 | 60,000 | June | Jan. '67 | National Steel Car |
| | 2 | Flat (Dep. Cen.) | 360,000 | 64 | 6 | 164,000 | July | May '67 | National Steel Car |
| | 350 | Gondola | 180,000 | 52 | 6 | ..... | May | Dec. | Hawker-Siddeley, Canada |
| | 250 | Quad. Hopper | 200,000 | 39 | 10 | 55,000 | June | Feb. '67 | Hawker-Siddeley, Canada |
| | 150 | Caboose | ..... | 34 | 4 | ..... | May | July '67 | Hawker-Siddeley, Canada |
| | 25 | Coil | 180,000 | 48 | .. | ..... | Mar. | Dec. | Int'l Equipment Co. |
| | 100 | Flat | 140,000 | 54 | 4 | 49,600 | Oct. | Feb. '67 | Int'l Equipment Co. |
| | 200 | Flat (Bulkhead) | 140,000 | 51 | 6 | 57,000 | Apr. | Dec. '67 | Marine Industries |
| | 100 | Cov. Hopper | 140,000 | 53 | 5 | 58,000 | May | Jan. '67 | Vancouver Iron & Eng. Works |
| | 400 | Cyl. Hopper | 200,000 | 50 | 6 | 60,000 | Dec. '65 | Dec. | Marine Industries |
| Canadian Pacific | 20 | Hopper | 205,800 | 37 | 4 | 57,200 | Jan. | Oct.-Nov. | National Steel Car |
| | 200 | Ins. Box | 135,700 | 50 | 6 | 84,300 | Jan. | Sept.-Nov. | National Steel Car |
| | 100 | Ins. Box | 142,700 | 50 | 6 | 77,300 | Jan. | Sept.-Nov. | National Steel Car |
| | 500 | Cov. Hopper | 206,900 | 48 | .. | 56,100 | May | Jan.-Apr. '67 | Marine Industries |
| | 500 | Gondola | 201,800 | 52 | 6 | 61,200 | Aug. | July-Sept. '67 | Hawker-Siddeley, Canada |
| | 50 | Gondola | 197,400 | 52 | 6 | 65,600 | Aug. | Oct. '67 | Hawker-Siddeley, Canada |
| | 100 | Bulkhead Flat | 159,400 | 56 | 6 | 60,600 | July | May '67 | Marine Industries |
| | 135 | Flat | 200,000 | 61 | .. | 63,000 | Sept. | Feb.-Apr. '67 | Int'l Equipment Co. |
| | 150 | Mech. Refrig. | 136,000 | 50 | 8 | 84,000 | Oct. | May-June '67 | National Steel Car |
| | 250 | Newsprint | 140,000 | 50 | 6 | 60,000 | Oct. | Mar.-Apr. '67 | National Steel Car |
| Pacific Great Eastern | 75 | Wood Chip | 165,000 | 60 | .. | ..... | Dec. '65 | Oct.-Dec. | Vancouver Iron & Eng. Works |
| | 150 | Log | 174,000 | 60 | .. | ..... | Apr. | Sept.-Oct. | National Steel Car |
| Ontario Northland | 100 | Gondola | 200,000 | 52 | 6 | 63,000 | May | Jan. '67 | Hawker-Siddeley, Canada |

## 1966 LOCOMOTIVE ORDERS

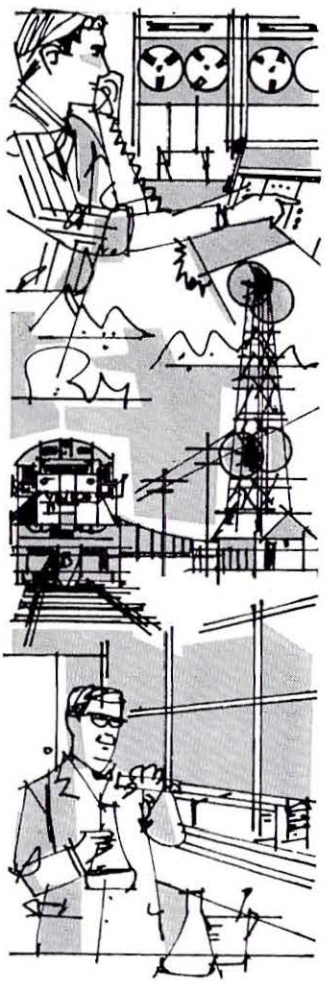
| Purchaser | No. | Wheel Arrange-ment | Service | Weight Lb. | Horse-power | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|
| Alaska Railroad | 1 | C-C | GP | 343,000 | 3,000 | Nov. | Apr. '67 | Subject to bid evaluation |
| Atchison, Topeka & Santa Fe | 10 | B-B | Pass. | 346,000 | 2,800 | Feb. | July-Sept. | General Electric |
| | 30 | ... | GP | 388,000 | 3,600 | Feb. | June-Sept. | EMD |
| | 20 | ... | GP | 388,000 | 3,000 | Feb. | Apr.-May | EMD |
| | 60 | ... | GP | 388,000 | 3,600 | July | Oct.-Dec. | EMD |
| Atlanta & Saint Andrews Bay | 1 | C-C | Frt. | 384,000 | 3,000 | Jan. | June | EMD |
| Atlantic Coast Line | 10 | C-C | Frt. | ..... | 3,600 | Mar. | Dec. | EMD |
| | 4 | C-C | Frt. | 331,100 | 3,000 | Mar. | Nov. | General Electric |
| | 15 | B-B | Frt. | ..... | 3,000 | May | Dec. | EMD |
| | 4 | B-B | Frt. | ..... | 3,000 | Aug. | Feb. '67 | General Electric |
| Baltimore & Ohio | 16 | B-B | Gen. Pur. | 277,000 | 3,000 | July | Nov. | EMD |
| Bangor and Aroostook | 3 | B-B | GP | 260,090 | 2,000 | July | Mar. '67 | EMD |
| Belt Railway of Chicago | 3 | B-B | GP | 271,600 | 2,400 | Mar. | May | Alco |
| Chesapeake & Ohio | 20 | C-C | Gen. Pur. | 389,650 | 3,000 | Jan. | July-Sept. | EMD |
| Chicago, Burlington & Quincy | 10 | B-B | Road-Frt. | 273,547 | 2,800 | Aug. | Oct.-Dec. | General Electric |
| | 10 | B-B | Road-Frt. | 273,547 | 2,800 | Aug. | Nov.-Dec. | General Electric |
| | 20 | B-B | Road-Frt. | ..... | 3,000 | Aug. | Dec. | EMD |
| Chicago Great Western | 9 | C-C | Frt. | 366,170 | 3,000 | Apr. | Sept. | EMD |
| Chicago, Milwaukee, St. Paul & Pacific | 14 | B-B | Gen. Pur. | 256,000 | 3,000 | May | Oct. | EMD |
| | 6 | B-B | Gen. Pur. | 260,000 | 2,800 | June | July | General Electric |
| | 21 | B-B | Gen. Pur. | 256,000 | 3,000 | Sept. | Jan. | EMD |
| | 4 | B-B | Gen. Pur. | 252,000 | 2,800 | Sept. | Nov.-Dec. | General Electric |
| Chicago, Rock Island & Pacific | 10 | B-B | Sw. | 248,000 | 1,500 | April | July | EMD |
| | 5 | B-B | Sw. | 240,000 | 1,500 | Mar. | Aug. | Alco |
| | 10 | B-B | Frt. | 252,000 | 2,800 | Jan. | April | General Electric |
| | 10 | ... | Frt. | 252,000 | 2,800 | May | Aug. | General Electric |
| | 2 | ... | Frt. | 252,000 | 2,800 | June | Aug.-Oct. | General Electric |
| | 20 | ... | Gen. Pur. | 256,000 | 3,000 | June | Sept.-Oct. | EMD |
| | 2 | ... | Gen. Pur. | 256,000 | 3,000 | June | Sept. | EMD |
| | 5 | ... | Sw. | 240,000 | 1,500 | June | Nov. | Alco |
| | 12 | ... | Gen. Pur. | 256,000 | 3,000 | Aug. | Dec. | EMD |
| | 8 | ... | Gen. Pur. | 256,000 | 3,000 | Aug. | Jan. '67 | EMD |
| | 20 | ... | Frt. | 252,000 | 2,800 | Aug. | Dec. | General Electric |
| Chicago & North Western | 20 | C-C | Road-Sw. | 386,000 | 3,600 | July | Feb.-Mar. '67 | EMD |
| | 1 | C-C | Road-Sw. | 386,000 | 3,000 | Aug. | Sept. | EMD |
| | 4 | B-B | Road-Sw. | 256,000 | 2,500 | Aug. | Dec. | Alco |
| | 3 | C-C | Road-Sw. | 386,000 | 3,000 | Sept. | Jan. '67 | EMD |
| Clinchfield | 8 | C-C | Frt. | 390,000 | 3,000 | May | Sept.-Oct. | EMD |
| | 10 | B-B | GP | 265,500 | 2,000 | Nov. | Apr. '67 | EMD |



(*Continued on page* 115)

# How Would You Spend $370 Million To Make A Great Railroad Better?

**Union Pacific is investing every dollar to improve its facilities and service to its shippers**



### COIN
Union Pacific's unique COMPLETE OPERATING INFORMATION NETWORK — Computerization, Data Processing, Inventory Control — immediate information on every conceivable function involved in operating one of the world's largest railroads.

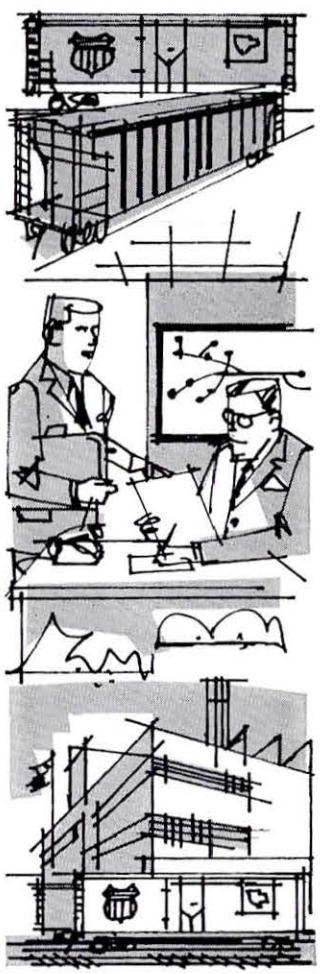
### ROLLING STOCK
1966-67 commitments add up to $310 million — 14,700 new freight cars, 165 high-powered diesel electrics.

### COMMUNICATIONS
U.P.'s radio network — 3400 miles long — one of the largest private microwave systems in the world. It provides 24-hour traffic control, better car routing and instant car locating service.

### FREIGHT TRAFFIC SALESMEN
keeping shippers informed. U.P.'s continuous traffic training programs provide salesmen with current, vital information for every shipper.

### RESEARCH AND DEVELOPMENT
Union Pacific's marketing team — chemists, technicians, engineers — formulate and develop new, advanced methods in all phases of railroad operation — transportation and natural resources.

### INDUSTRIAL DEVELOPMENT
In 1966 alone, an estimated 500 industries will have located in U.P.'s booming West. Plant sites and industrial parks are constantly promoted in the 13 blue chip states of the U.P. West.



UNION PACIFIC RAILROAD

GATEWAY TO AND FROM . . . THE BOOMING WEST

Circle 39 on reader service card

This mark tells you a product is made of steel

## A car made of USS Cor-Ten Steel has built-in protection

Some railroad cars don't mind being out in the snow and rain for 10 or 20 years.

For example, some USS COR-TEN High-Strength Low-Alloy Steel cars built in the Forties (only about a decade after COR-TEN steel was introduced) are still going strong. Why? Because this steel is 5 to 8 times as resistant to atmospheric corrosion as carbon steel. Paint lasts twice as long, and COR-TEN steel is approximately 50% stronger.

Today, you see more and more railroad cars built with USS COR-TEN Steel. It offers more durability and longer life for the owner... greater dependability for the shipper. Whether your interest lies in hoppers, gondolas, "reefers," boxcars... or another type of car, you can have the special properties of USS COR-TEN High-Strength Low-Alloy Steel working for you winter and summer. Check on it the next time you're leasing or buying.

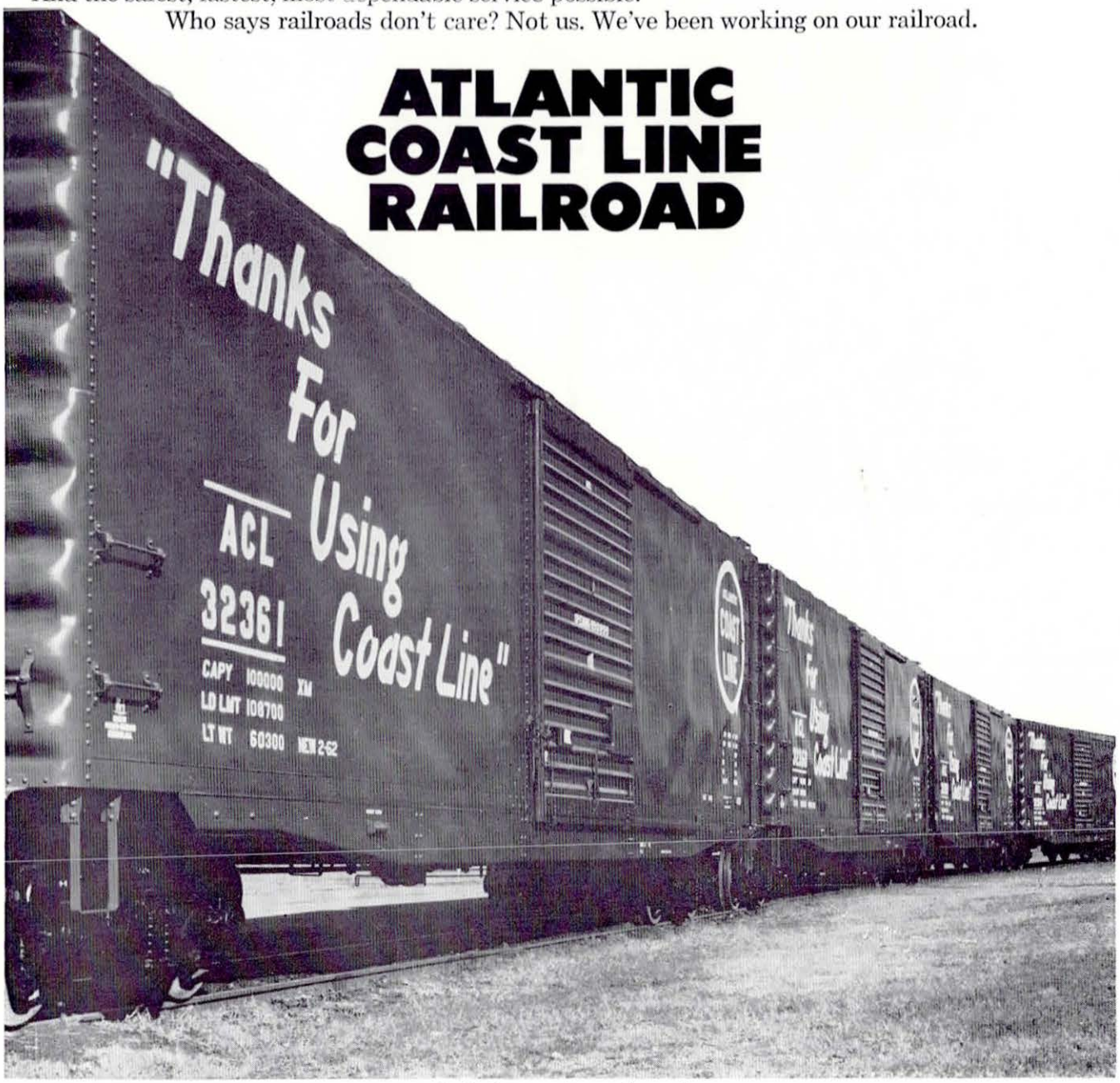
For the latest information on USS COR-TEN Steel or the entire USS Family of Steels, contact our sales office nearest you. Or write to United States Steel, Room 9116, 525 William Penn Place, Pittsburgh, Pa. 15230. USS and COR-TEN are registered trademarks.

## USS United States Steel: where the big idea is innovation

# ARE WE TALKING TO OURSELVES?

Not at all.
When we say "Thanks for using Coast Line", we're trying to tell you we appreciate your business.
But saying it isn't enough. So we try to show it.
By giving you the kind of equipment you want. The attention you deserve.
And the safest, fastest, most dependable service possible.
Who says railroads don't care? Not us. We've been working on our railroad.

## ATLANTIC COAST LINE RAILROAD




Circle 60 on reader service card

## 1966 LOCOMOTIVE ORDERS (Continued)

| Purchaser | No. | Wheel Arrangement | Service | Weight Lb. | Horsepower | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|
| Cuyahoga Valley | 1 | B-B | Sw. | 248,000 | 1,000 | July | Nov. | EMD |
| Delaware and Hudson | 6 | C-C | Frt. | 390,000 | 3,000 | Sept. | Mar. '67 | General Electric |
| Denver & Rio Grande Western | 7 | B-B | Sw. | 246,900 | 1,000 | April | Oct.-Nov. | EMD |
| | 5 | B-B | Gen. Pur. | 259,900 | 3,000 | April | Sept.-Oct. | EMD |
| | 12 | B-B | Gen. Pur. | 259,900 | 3,000 | Aug. | Feb. '67 | EMD |
| | 10 | C-C | Gen. Pur. | 390,000 | 3,600 | Aug. | Jan. '67 | EMD |
| Great Northern | 6 | B-B | GP | 270,793 | 2,800 | Jan. | June | General Electric |
| | 6 | B-B | Pass. | 369,090 | 3,000 | Jan. | June | EMD |
| | 8 | B-B | GP | 367,170 | 3,600 | Jan. | June | EMD |
| Gulf, Mobile & Ohio | 9 | ... | Gen. Pur. | 360,000 | 3,000 | April | Sept. | EMD |
| | 1 | ... | Gen. Pur. | 360,000 | 3,000 | April | May | EMD |
| Illinois Central | 20 | ... | GP | 260,000 | 3,000 | Sept. | Jan.-Feb. '67 | EMD |
| | 6 | ... | GP | 260,000 | 3,000 | Sept. | Mar. '67 | General Electric |
| Lehigh & Hudson River | 3 | B-B | Rd.-Sw. | 263,000 | 2,000 | Apr. | July | Alco |
| Louisville & Nashville | 4 | C-C | Frt. | ..... | 3,000 | Mar. | July-Sept. | EMD |
| | 10 | B-B | Frt. | ..... | 2,000 | June | Sept. | Alco |
| | 5 | B-B | Frt. | ..... | 2,800 | July | Nov.-Dec. | General Electric |
| | 10 | B-B | Frt. | ..... | 3,000 | June | Oct.-Nov. | EMD |
| Maine Central | 12 | B-B | GP | 257,000 | 2,000 | Aug. | Nov.-Dec. | EMD |
| Minneapolis, Northfield & Southern | 2 | B-B | GP | 235,000 | 1,500 | Mar. | Dec. | EMD |
| Missouri-Kansas-Texas | 12 | B-B | Frt. | 262,000 | 3,000 | Mar. | Aug. | EMD |
| Missouri Pacific | 20 | C-C | GP | 396,000 | 3,000 | Oct. | Feb.-Mar.'67 | EMD |
| | 5 | B-B | GP | 263,000 | 2,000 | July | Nov. | EMD |
| Monon | 6 | B-B | GP | 272,000 | 2,000 | May | Aug. | Alco |
| New York Central | 2 | B-B | Road-Sw. | 270,700 | 2,800 | Apr. | May | General Electric |
| | 10 | B-B | Road-Sw. | ..... | 3,000 | Dec. | Jan. '67 | General Electric |
| Norfolk & Western | 30 | B-B | Gen. Pur. | 277,500 | 3,000 | Jan. | April-May | EMD |
| | 30 | C-C | Gen. Pur. | 392,000 | 3,000 | Jan. | May-June | EMD |
| | 35 | C-C | Gen. Pur. | 410,000 | 3,600 | Jan. | Aug.-Oct. | EMD |
| | 20 | C-C | Gen. Pur. | 408,000 | 2,750 | Jan. | April-May | Alco |
| | 5 | C-C | Gen. Pur. | 408,000 | 3,000 | Jan. | May | Alco |
| | 30 | B-B | Gen. Pur. | 280,000 | 2,800 | Jan. | July-Oct. | General Electric |
| | 5 | C-C | Gen. Pur. | 408,000 | 3,000 | Sept. | June | Alco |
| | 30 | C-C | Gen. Pur. | 410,000 | 3,600 | Sept. | May-Sept. | EMD |
| | 15 | B-B | Gen. Pur. | 280,000 | 3,000 | Sept. | April-May | General Electric |
| Northern Pacific | 12 | C-C | Frt. | 390,000 | 2,800 | Jan. | May-June | General Electric |
| | 4 | C-C | Frt. | 390,000 | 3,600 | Jan. | June-July | EMD |
| | 16 | C-C | Frt. | 390,000 | 3,600 | Oct. | May-June '67 | EMD |
| Pennsylvania | 15 | C-C | Frt. | 395,500 | 2,800 | Apr. | Oct. | General Electric |
| | 15 | C-C | Frt. | 391,500 | 3,000 | Apr. | Jan. '67 | Alco |
| | 65 | C-C | Frt. | 389,000 | 3,600 | Apr. | Jan. '67 | EMD |
| | 5 | C-C | Frt. | 395,500 | 3,000 | Apr. | Jan. '67 | General Electric |
| Richmond, Fredericksburg & Potomac | 1 | B-B | Sw. | 254,380 | 1,500 | Dec. '65 | Nov. | EMD |
| | 5 | B-B | GP | 267,000 | 3,000 | Dec. '65 | Nov. | EMD |
| | 2 | B-B | GP | 267,000 | 3,000 | Dec. '65 | Mar. '67 | EMD |
| St. Louis-San Francisco | 12 | C-C | Frt. | 380,000 | 3,600 | Sept. | Feb.-Mar. '67 | EMD |
| Seaboard Air Line | 1 | B-B | GP | 249,500 | 2,000 | Mar. | June | Alco |
| | 15 | B-B | GP | 264,000 | 3,000 | June | Jan. '67 | EMD |
| | 15 | B-B | GP | 264,000 | 3,000 | June | Jan. '67 | General Electric |
| | 6 | B-B | GP | 264,000 | 3,000 | Sept. | Feb. '67 | EMD |
| | 1 | C-C | GP | 364,000 | 3,000 | Jan. | June | EMD |
| oo Line | 4 | B-B | Rd. Sw. | ..... | 3,000 | Aug. | Feb.-Mar. '67 | EMD |
| Southern Pacific | 10 | B-B | Sw. | 251,000 | 1,500 | Jan. | Nov.-Dec. | Alco |
| | 166 | ... | ... | ..... | .... | 1966 | 1966-67 | Various |
| Spokane, Portland & Seattle | 8 | B-B | Frt. | 270,000 | 2,500 | Mar. | June-July | Alco |
| Tennessee Central | 2 | B-B | GP | 242,590 | 2,000 | Jan. | Feb. | Alco |
| Texas Mexican | 1 | ... | GP | 250,000 | 2,000 | June | Dec. | EMD |
| | 1 | ... | GP | 250,000 | 2,000 | Aug. | June '67 | EMD |
| Union Pacific | 8 | ... | Frt. | ..... | 3,000 | Feb. | Mar. | EMD |
| | 35 | ... | Frt. | ..... | 3,000 | Apr. | Nov.-Dec. | EMD |
| | 5 | ... | Frt. | ..... | 3,000 | Apr. | Oct. | Alco |
| | 5 | ... | Frt. | ..... | 2,800 | Apr. | Sept. | General Electric |
| Western Maryland | 5 | B-B | Sw. | ..... | 3,000 | Apr. | Aug. | EMD |

## 1966 LOCOMOTIVE ORDERS—EXPORT

| Purchaser | No. | Wheel Arrangement | Service | Weight Lb. | Horsepower | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|
| Angola-Luanda Railway, Angola | 10 | C-C | GP | 160,000 | 1,310 | Feb. | May '67 | GM Overseas |
| Argentina—Somisa | 3 | B-B | Haulage | 130,000 | 520 | Nov. | July '67 | General Electric |
| Brazil—C. V. Rio Doce | 15 | C-C | GP | 217,000 | 1,800 | Mar. | Nov.-Dec. | GM Overseas |
| Brazil—ICOMI | 1 | B-B | Sw. | 245,000 | 1,200 | Jan. | May | GM Overseas |
| Brazil | 4 | B-B | Sw. | 200,000 | 1,050 | May | June | General Electric |
| Brazil—RFFSA | 45 | C-C | GP | 360,000 | 2,000 | July | Mar.-Apr. '67 | GM Overseas |
| | 4 | C-C | GP | 368,000 | 3,000 | July | Apr. '67 | GM Overseas |
| | 20 | B-B | GP | 117,000 | 700 | June | July-Sept. '67 | General Electric |
| Chihuahua Pacifico | 4 | C-C | GP | 370,000 | 2,750 | Aug. | 1947 | Alco |
| Chile—Acero del Pac | 3 | C-C | GP | 196,000 | 1,310 | Feb. | Aug. | GM Overseas |
| Chile | 1 | B-B | Sw. | 90,000 | 286 | Jan. | April | General Electric |
| | 1 | B-B | Sw. | 90,000 | 286 | April | Dec. | General Electric |
| | 2 | B | Haulage | 8,000 | 40 | Oct. | May '67 | General Electric |
| | 1 | B | Haulage | 22,000 | 80 | Oct. | May '67 | General Electric |
| | 8 | C-C | Pass.-Frt. | 183,000 | 1,420 | Sept. | Jan. '67 | General Electric |
| Colombia | 2 | B | Sw. | 50,000 | 143 | Mar. | Oct. | General Electric |
| C. I. E. Ireland | 12 | B-B | GP | 160,000 | 1,000 | Jan. | Sept. | GM Overseas |
| Fluor Corp., Korea | 2 | B-B | GP | 111,000 | 890 | May | Nov. | GM Overseas |
| A. E. Goodwin | 1 | C-C | GP | 368,500 | 2,750 | Nov. | 1967 | Alco |
| Honduras—United Fruit | 14 | B-B | Frt. | 130,000 | 700 | Aug.-Oct. | April '67 | General Electric |
| India | 21 | C-C | Sw. | 277,700 | 950 | June | 1967 | Alco |
| | 1 | B | Sw. | 70,000 | 235 | Jan. | July | General Electric |
| Israel State Railway | 2 | B-B | GP | 160,000 | 1,310 | Mar. | Aug. | GM Overseas |
| Kaiser Aluminum Co., Jamaica | 1 | C-C | GP | 360,000 | 2,000 | July | Jan. '67 | GM Overseas |
| | 1 | B-B | Sw. | 230,000 | 1,000 | May | Dec. | GM Overseas |
| Korea National Railway | 10 | B-B | GP | 160,000 | 1,310 | Jan. | May-June | GM Overseas |
| | 6 | C-C | GP | 250,000 | 1,800 | Jan. | May | GM Overseas |
| | 49 | B-B | GP | 159,000 | 950 | April | Sept.-Dec. | Alco |

SODIUM SILICO ALUMINATE ADDED
NET WT.
1 LB. 10 OZ.
Salt

# Any hopper worth its salt is worth Alcoa Aluminum

MoPac is using 200, 100-ton-capacity, covered hopper cars made of Alcoa® Aluminum to move salt over its Texas & Pacific line. They are one of several carriers choosing aluminum for this purpose.

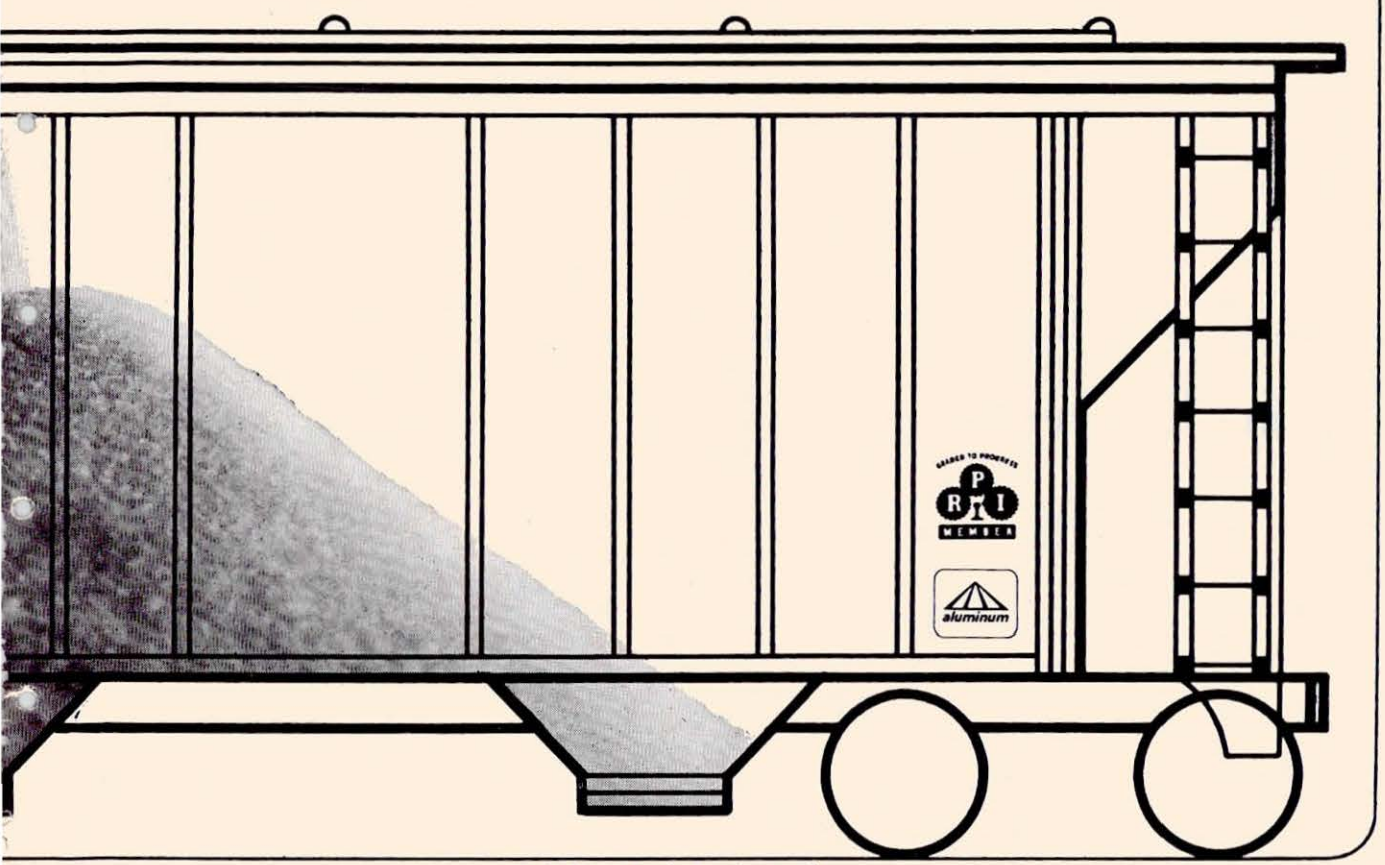
MoPac asked Magor to build the cars of aluminum, because this gleaming metal stands up to salt without corroding or pitting. On the other hand, salt will pepper ordinary metals—so shipping by the conventional hopper car demands a $900 plastic liner, which has to be replaced periodically. Adds up to quite an expense.

When not delivering salt, MoPac uses the same cars to haul grain. MoPac can do this because aluminum is inert and won't affect the flavor of foodstuffs. (Now you know why frozen dinners are packed, shipped, stored, displayed, cooked and served in aluminum containers.)

If shipping food is your business, or if you handle cargoes that aren't compatible with ordinary metals, may we whet your appetite for aluminum? Simply call your nearest Alcoa sales office, listed in the classified pages of your telephone directory. Or write Aluminum Company of America, 1691-A Alcoa Building, Pittsburgh, Pa. 15219.

**Change for the better with Alcoa Aluminum**

ALCOA




Circle 43 on reader service card

## 1966 LOCOMOTIVE ORDERS—EXPORT (Continued)

| Purchaser | No. | Wheel Arrangement | Service | Weight Lb. | Horsepower | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|
| Korea Oil Co., Korea | 1 | B-B | GP | 111,000 | 890 | May | Nov. | GM Overseas |
| Mexico—MGRS | 10 | C-C | GP | 256,000 | 3,000 | Dec. | Mar. '67 | GM Overseas |
| | 7 | B-B | GP | 111,000 | 800 | Dec. | May '67 | GM Overseas |
| Mexico | 1 | B | Sw. | 70,000 | 235 | Mar. | Oct. | General Electric |
| | 1 | B-B | Sw. | 160,000 | 520 | July | Sept. | General Electric |
| | 1 | B | Sw. | 50,000 | 143 | Sept. | Nov. | General Electric |
| National Railways of Mexico | 10 | C-C | GP | 368,000 | 2,750 | Sept. | 1967 | Alco |
| New Zealand Government Railways | 34 | A-1-A | GP | 195,000 | 1,310 | Aug. | May-Aug. '67 | GMD Ltd. |
| Orinoco Mining Co., Venezuela | 3 | C-C | GP | 360,000 | 2,000 | Sept. | Mar. '67 | GM Overseas |
| Pakistan Western | 20 | C-C | GP | 251,000 | 2,400 | July | 1967 | Alco |
| Peru | 2 | C-C | GP | 158,500 | 1,200 | Feb. | 1967 | Alco |
| Philippines | 2 | B | Sw. | 64,000 | 235 | April | Dec. | General Electric |
| South Africa—ISCOR | 3 | C-C | GP | 196,000 | 1,310 | June | Aug. | GM Overseas |
| Taiwan Railway | 22 | A-1-A | GP | 160,000 | 1,310 | Jan. | July | GM Overseas |
| | 21 | B-B | GP | 111,000 | 800 | Jan. | July | GM Overdseas |
| Tunisia—C. due Phos. Sfax | 2 | C-C | GP | 196,000 | 1,310 | Jan. | Aug. | GM Overseas |
| Yugoslavia Railways | 33 | C-C | GP | 217,000 | 1,800 | Feb. | Oct.-Nov. | GM Overseas |
| | 2 | B | Haulage | 10,000 | 24 | May | Jan. '67 | General Electric |
| | 5 | B | Haulage | 6,000 | 12 | Oct. | April '67 | General Electric |
| Zambia-Rhokana Corp. | 1 | B-B | GP | 111,000 | 890 | June | Nov. | GM Overseas |
| Zambia | 8 | B | Haulage | 16,000 | 24 | Nov. | June '67 | General Electric |
| | 26 | C-C | Pass.-Frt. | 200,000 | 2,150 | Sept. | Jan.-Apr. '67 | General Electric |
| | 1 | B | Haulage | 16,000 | 24 | Feb. | Oct. | General Electric |

## 1966 LOCOMOTIVE ORDERS—CANADIAN DOMESTIC

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Canadian National | 19 | ... | Road-Sw. | 256,000 | 2,400 | Sept. | Apr. '67 | Montreal Locomotive |
| | 2 | ... | Road-Sw. | 350,000 | 3,000 | Sept. | May '67 | Montreal Locomotive |
| | 6 | ... | Road-Sw. | 244,800 | 3,000 | Sept. | Sept. '67 | GMD Ltd. |
| | 8 | ... | Road-Sw. | 260,000 | 3,000 | Sept. | Oct. '67 | GMD Ltd. |
| Canadian Pacific | 33 | C-C | Frt. | 390,000 | 3,000 | June | Jan.-Apr. '67 | GMD Ltd. |
| B. C. Hydro & Power Authority | 1 | B-B | Sw. | 240,000 | 1,000 | Aug. | June '67 | GMD Ltd. |
| Pacific Great Eastern | 3 | B-B | Frt. | 120,000 | 1,800 | Feb. | Sept. | Montreal Locomotive Works |

## 1966 PASSENGER-TRAIN CAR ORDERS

| Purchaser | No. | Type | Length Ft. | Length In. | Construction | Seating Capacity | Weight | Order Date | Delivery Date | Builder |
|---|---|---|---|---|---|---|---|---|---|---|
| Canadian National | 15 | Coach | 85 | .. | Aluminum & Steel | 82 | 81,500 | Oct. | Aug. '67 | Hawker Siddeley Canada |
| | 5 | Buffeteria | 85 | .. | Aluminum & Steel | 26 | 80,000 | Oct. | Aug. '67 | Hawker Siddeley Canada |
| | 5 | Parlor | 85 | .. | Aluminum & Steel | 39 | 83,000 | Oct. | Aug. '67 | Hawker Siddeley Canada |
| | 2 | Business | 85 | .. | Aluminum & Steel | ... | 83,000 | June | ..... | Hawker Siddeley Canada |
| Chicago & North Western | 12 | Gallery Double Deck | 85 | .. | Alloy Steel | 161 | 126,000 | Oct. | Sept. '67 | Pullman Standard |
| | 4 | Gallery Double Deck Cab Control | 85 | .. | Alloy Steel | 155 | 129,000 | Oct. | Sept. '67 | Pullman-Standard |
| Cleveland Transit System | 20 | Rapid Transit | 70 | .. | Stainless Steel | 80 | 64,000 | July | May-Aug. '67 | Pullman-Standard |
| Delaware River Port Authority | 25 | Rapid Transit (Single) | 67 | 10 | Stainless Steel | 72 | 71,000 | May | Sept. '67-Feb. '68 | Budd |
| | 50 | Rapid Transit (Married Pairs) | 67 | 10 | Stainless Steel | 80 | 67,500 | May | Sept. '67-Feb. '68 | Budd |
| Pennsylvania | 20 | Coach (Self-Prop.) | 85 | .. | Stainless Steel | 80 | ..... | May | Sept. '67 | Budd |
| | 20 | Coach (Self-Prop.) | 85 | .. | Stainless Steel | 64 | ..... | May | Nov. '67 | Budd |
| | 10 | Parlor (Self-Prop.) | 85 | .. | Stainless Steel | 34 | ..... | May | Dec. '67 | Budd |
| Port Authority Trans-Hudson (New York) | 14 | Motorized "A" Cars | 51 | 0 | Aluminum Alloy | 43 | 56,700 | Jan. | ..... | St. Louis Car |
| | 30 | Motorized "C" Cars | 51 | 0 | Aluminum Alloy | 46 | 55,200 | Jan. | ..... | St. Louis Car |
| Southeastern Pennsylvania Transportation Authority | 11 | Coach (MU) | 85 | .. | Stainless Steel | 76 | 160,000 | Sept. | June-July '67 | Budd |
| United Aircraft-Canadian National | 35 | Turbo Train | .. | .. | Aluminum | 340 | ..... | Apr. | Mar.-June '67 | Montreal Locomotive Works |
| United Aircraft-New Haven | 4 | Power Dome | 73 | 3 | Aluminum | 108 | ..... | Feb. | Feb. '67 | Pullman-Standard |
| | 2 | Coach | 56 | 10 | Aluminum | 48 | ..... | Feb. | Feb. '67 | Pullman-Standard |

# Fixed-property improvements

Reports submitted to Railway Age by Class I railroads in Canada and the United States show that in 1966 the largest amount of capital expenditures for large projects was for grade-separation work. This category represented 32% of the total for projects costing $1 million or more. The second largest category in terms of cost was for new track construction, representing 20%. The third and fourth categories by expenditures were for buildings and for yard construction and improvements, each representing 17%.

Some roads reported that their plans for 1967 capital expenditures were not complete. But, of those roads that did report their plans for this year, the buildings category led with 29%; the new-track construction category was second with 25%; the yard construction and improvement category was third with 15%; and the bridges-and-piers category was a weak fourth with 8%.

Following are brief descriptions of the improvement projects authorized for 1967 which are estimated to cost $500,000 or more. These are followed by a list of projects that cost $1 million or more, which were either completed or under way in 1966.

### Authorized for 1967

**Atlantic Coast Line:** New drainage at the shops at Waycross, Ga., $513,000; open-deck trestle with ballast-deck trestle; and reconstruct 624 feet of bridge involving replacement of through-truss span and two fixed through-truss spans with one 120-foot through-girder span and deck-plate spans at Remini, S.C., $827,000; and

replace one through-truss swing span and two fixed truss spans with one rolling-lift draw-span and deck plate girder spans over Savannah river at Georgia-South Carolina state line, $980.000.

**Central of New Jersey:** First Avenue grade-crossing elimination at Raritan, N.J., $1,000,000.

**Baltimore & Ohio/Chesapeake & Ohio:** Expand the yard at Dayton, Ohio, $1,000,000; track changes at Penn-Mary, Md., $500,000; head-on connection at Cincinnati, Ohio, $900,000; bunkhouse facilities at Stevens, Ky., $500,000; weigh-in-motion scales at Barboursville, W.Va., and Torchlight, Ky., $600,000; and yard facilities at Walbridge, Ohio, $3,117,000.

**Chicago & Eastern Illinois:** Replace present bridge structure over Wabash river at Clinton, Ind., $3,500,000; modify piers and renew superstructure on bridge over White river at Decker, Ind., $1,000,000.

**Chicago, Rock Island & Pacific:** Piggyback facility, freight-yard office and freight scales at Inver Grove, Minn., $657,000; and engine and car department facilities, waste-disposal system and engine-servicing facilities at El Reno, Okla., $1,033,000.

**Delaware & Hudson:** Relocate railroad facilities in connection with construction of Interstate Route 90 at Albany, N.Y., $1,500,000.

**Gulf, Mobile & Ohio:** Construct total of 55 miles of TCS in three segments, $500,000.

**Illinois Central:** Microwave communication system from Jackson, Miss., to Harahan, La., $670,000; CTC between Freeport, Ill., and Waterloo, Iowa, $910,000; 3.5 miles of new mine lead at Walton, Ill., $915,000; and new long passing track at Belleville, Ill., $725,000.

**Louisiana & Arkansas:** Expand yard at North Baton Rouge, La., $500,000.

**New York Central:** Relocate passenger station and related facilities from downtown Albany, N.Y., to Karner Road, Colonie, N.Y., $2,000,000; new double-track bridge over the Rouge River at Dearborn, Mich., $1,750,000; relocate tracks and other facilities at Springfield, Ohio, $522,000; reconstruct spans 6 and 7 for additional clearance over New York State Barge canal at Oswego, N.Y., $933,000; raise bridge over Oneida River near Brewerton, N.Y., $822,000; install TCS system between Jackson, Mich., and Kalamazoo, and retire 46 miles of track, $683,000.

**Northern Pacific:** Extend micro-wave between Fargo, N.D., and Laurel, Mont., $2,300,000; extend CTC on double-track line between Castle Rock, Wash., and Wabash, $1,870,000.

**Pennsylvania:** Three-track auto-unloading facility and three additional set-off tracks at Metuchen, N.J., $690,000; automobile unloading facility for Ford Motor Co. at Secaucus, N.J.; renew signal cable between Newark, N.J., and Trenton, $876,800; replace 30 spans of elevated branch at West Philadelphia, Pa., with all-welded bridge, $550,000; spur track at Faulkner, Md., $2,300,000; cooperative apartment house on north side of John F. Kennedy Boulevard between 19th and 20th Streets, Philadelphia, $12,000,000; one-spot servicing facility for diesel locomotives at Conway, Pa., $707,000; extend Captina branch 10 miles at Powhatan Point, Ohio, $4,450,000; coal-handling facilities at Ashtabula, Ohio, $6,500,000; new White Cottage Line between Waynesburg, Pa., to Brave and Blacksville, Pa., $17,743,600; construct Gateway No. 2 building over the air rights at Chicago Union Station, $22,000,000; automatic highway crossing protection at 51 crossings, $1,000,000; and install TCS on 30.8 miles of track, $750,000.

**Pittsburgh & Lake Erie:** Rearrange P&LE facilities to permit use by B&O trains from "MK" to Sinns, McKeesport, Pa., $4,116,000; consolidate five attended interlockers and control points and install 101 additional miles of TCS at various locations, $1,815,000.

**Reading:** New wheel shop at Reading, Pa., $993,000.

**Southern:** Improvements at several yards, $1,085,000; industry tracks and facilities, $3,069,000; construct and extend passing tracks, $699,000; and construct and extend container and piggyback facilities, $852,000.

**Union Pacific:** New yard trackage at East Spokane, Wash., $901,660; microwave systems between Denver, Colo., and Cheyenne, Wyo., $528,905; between Pocatello, Ida., and Huntington, Ore., $854,868; between Hinkle, Ore., and Portland, $504,900; and between Omaha, Neb., and Kansas City, Kan., and Marysville, Kan., to Salina, $1,560,000.

## Completed or under way

*(Figures in parentheses indicate percentage of completion on Jan. 1, 1967)*

**Bessemer & Lake Erie:** New shiploader, coal-storage facilities and related conveying equipment at Conneaut, Ohio, $2,000,000 (10).

**Canadian National:** New merchandise terminal at Toronto, Ont., $5,400,000 (60); industrial spur and support yard at Talbotville, $2,195,000 (70); terminal project at Vancouver, B.C., $27,000,000 (10); 438-mile line from near Grimshaw, Alta. to Pine Point, N.W.T., $86,250,000 (94); 68 miles of line from Amesdale, Ont., to Bruce Lake, $12,000,000 (20); 12-mile extension from Stall Lake to Osborn Lake, $1,600,000 (5); and 18 miles of line from Watrous, Sask., to a point near Guernsey, Sask. $1,800,000 (2).

**Canadian Pacific:** Install CTC and extend sidings from Cartier, Ont., to Current River, $2,699,800 (100); freight-handling shed with two-story office building and related track changes, Toronto, $2,233,000 (95); 6.6 miles of branch line and 1.3 miles of siding to serve Falconbridge nickel mines, $1,135,000 (90); 16.5 miles of branch line at Didsbury, Alta., $1,374,000 (90); install CTC and extend sidings between Greely, B.C., and Lake Louise, Alta., $1,290,000 (100); and car-cleaning and freight-car repair facilities at Coquitlam, B.C., $2,336,000 (50).

**Chesapeake & Ohio/Baltimore & Ohio:** Coal pier at Curtis Bay, Md., $10,500,000 (60); extend Egypt Valley line at Lafferty, Ohio, $6,653,600; and extend the Robinson Run branch at Shinnston, W.Va., $2,211,000 (10).

**Chicago & Eastern Illinois:** Replace present bridge over Wabash River at Clinton, Ind., $3,500,000 (16); modify piers and renew superstructure on bridge over White River at Decker, Ind., $1,000,000 (20).

**Chicago, Burlington & Quincy:** CTC between Montgomery, Ill., and Galesburg, $1,606,700; construct diesel maintenance shop and rearrangement of trackage at Lincoln, Neb., $2,716,900; modernize general office building in Chicago, $1,173,250; one-spot car-repair facility at Kansas City, Mo., $1,456,300; rearrange main line and construct new yard trackage and new freighthouse at Western Ave., Chicago, $1,519,300; modernize hump yard at North Kansas City, Mo., $7,790,250.

**Detroit, Toledo & Ironton:** 36-track hump yard with semi-automatic retarders, additional receiving and departure tracks, new yard office and light car-repair facilities at Flat Rock, Mich., $4,800,000 (60).

**St. Louis-San Francisco:** Thirty-three miles of line to serve Lead Belt at Salem, Mo., $6,000,000 (60).

**Lehigh Valley:** Reconstruct main line between Cranford, N.J., and Newark, $225,000,000 (95).

**Louisiana & Arkansas:** New freighthouse and office building at New Orleans, La., $1,365,000; new freighthouse and office building at North Baton Rouge, La., $1,120,400.

**Louisville & Nashville:** Reconstruct bridge No. 23 on new alignment across St. Louis Bay, Miss., $5,000,000 (30); install wayside radio stations, dispatcher-to-train system, $2,318,000 (45); CTC system between Latonia, Ky., and Winchester, $1,450,000 (95).

**New York Central:** Raise various overhead bridges and increase tunnel clearances, including daylighting of Sing Sing tunnel, between Selkirk, N.Y., and Tarrytown, $3,600,000 (100); Alfred E. Perlman yard at Selkirk, N.Y., $26,337,000 (10); relocate main-line

## WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

**SOMETHING NEW AT THE ICC**—An ICC commissioner, completing his one-year term in the Commission's rotating chairmanship, traditionally uses a December speech, more-or-less incidentally, to comment on his year as Commission leader. Commissioner John W. Bush, the Commission's 1966 chairman, did that (RA, Dec. 19/26, 1966, p. 58), but he also added something new. Before turning the reins over to chairman William H. Tucker for 1967, Bush released to the press a year-end statement entitled "Summary of ICC Activities During 1966." On some matters, the statement may have scooped the Commission's annual report, which was not expected until the latter part of this month.

Bush dealt with several matters, including railroad merger proposals, the new Cabinet-level Department of Transportation, freight car supply, railroad passenger service, and management improvements at the Commission. He confessed that the latter "came none too soon to meet the avalanche of incoming proceedings."

**MERGERS, DOT**—As to railroad mergers, Bush revealed that Commission actions were "imminent" on petitions asking it to begin hearings on the Norfolk & Western-Chesapeake & Ohio merger proposal, and to reconsider its adverse decision in the Northerns' case, which contemplates merger of the Great Northern, Northern Pacific and Burlington. Those Commission actions were formally announced within a week. They set N&W-C&O for hearing April 17, and reopened the Northerns' case for further hearing March 6.

As to DOT, which will be headed by Alan S. Boyd as Secretary of Transportation, Bush noted that its establishment was supported unanimously by the Commission. He anticipates that it will accomplish its purpose of providing "stronger and more coordinated federal leadership for general transportation policy, research and safety." Transfer of ICC safety and standard-time functions to the new Department will cut the Commission's staff by about 17%, Bush also reported.

**CAR SUPPLY, PASSENGER SERVICE**—He welcomed the incentive per diem law, which Congress enacted last year, as a new weapon for the Commission's war on freight-car shortages. The railroad industry was divided on this law, which permits the Commission to beef up per diem rates for rental of freight cars with incentive factors calculated to promote more buying and more efficient utilization of cars.

As to railroad passenger service, the retiring chairman predicted that its "revitalization" will be promoted in 1967 by "more positive Commission action." Bush expects this because of Chairman Tucker's "already demonstrated sound policy leadership in resolving problems that must be ironed out to improve rail passenger service." Tucker is on record in favor of tightening the Interstate Commerce Act's train-off provisions.

**MUTUAL ADMIRATION**—The Bush statement also said it is of "extreme importance" that the Commission this year will have, in Tucker, "an imaginative chairman." Bush further described his successor in the chairmanship as "an experienced transportation lawyer," who will "continue to be in the vanguard of those who are constantly seeking better ideas and improved methods by which the Commission and the industry can more fully serve the public."

Tucker thinks as well of Bush. In a year-end speech, he congratulated the retiring chairman for having done "a remarkable job of stemming freight car shortages with what informed insiders know were very few weapons." Bush's "forecful actions in this area are indicative of the direct positive leadership he exercised over Commission activities throughout the year," Tucker continued, adding: "The favorable status of the Commission as I assume the chairmanship is due in no small measure to the untiring efforts of John W. Bush in 1966."

tracks and construct new yard at Portage, Ind., $2,200,000 (100); construct, in addition to relocated main line, a yard consisting of two receiving and six classification tracks at Portage, Ind., $1,900,000 (100).

**Norfolk & Western:** Install ground coal-storage facilities and transfer terminal at Sandusky, Ohio, $5,750,000 (75); 8.4-mile extension of Big Creek branch from Jewell, Va., to Whitewood, $7,350,000 (5); 5.8-mile spur up Big Creek and Long Fork at Nolan Spur, Ky., $2,475,000 (5); enlarge Brooklyn yard at East St. Louis, Ill., $5,000,000 (15).

**Northern Pacific:** Extend CTC from Paradise, Mont., to Sand Point, Ia., $1,100,000 (75); extend CTC on double-track line from Castle Rock, Wash., to Vancouver, B.C., $1,000,000 (30); retarder yard at Missoula, Mont., $1,500,000 (90).

**Pennsylvania:** TrucTrain terminal, new yard office, entrance to terminal and expanded storage capacity at Kearny, N.J., $1,155,900 (100); install enginehouse and car-shop facilities at Pavonia yard, Camden, N.J., $1,026,500 (100); renew 44 spans on elevated branch at West Philadelphia, Pa., $1,359,800 (75); spur track at Faulkner, Md., $2,300,000 (45); provide facilities for high-speed demonstration project, New York to Washington, D.C., $33,264,800 (35); Madison Square Garden in New York on site of Pennsylvania Station, $116,000,000 (35); new yard at Wheelock, Ohio, $1,900,000 (75); new yard at Lordstown, Ohio, $3,000,000 (95); reconstruct bridge No. 294.89 at Riverdale, Ill., $2,020,000 (100); new yard at Middletown, Ohio, $2,088,200 (60).

**Reading:** Electrify track between Newton Jct., and Fox Chase, N.J., $2,000,000 (100).

**Seaboard Air Line:** Develop Miami Industrial Park North $2,283,000 (34); major improvements to yard and shop facilities at Hialeah, Fla., $1,634,800 (96).

**Southern:** Install CTC on Charlotte division, $4,674,000 (95); new yard at Macon, Ga., $12,000,000 (100); access tracks to coal mines at various locations, $3,000,000 (60).

**Union Pacific:** All-electric "NX" route interlocking between Missouri River bridge and Gilmore Jct., Neb., $2,971,000 (50); new eastbound retarder yard at North Platte, Neb., $12,020,000 (2); line change to reduce curvature and distance from Medicine Bow, Wyo., to Como, $3,138,700 (100); five short line changes east of Portland, Ore., $1,545,650 (18); Microwave system between Salt Lake City, Utah, and Los Angeles, Calif., $1,465,490 (95); traffic control center at Salt Lake City, $1,118,300 (5). ■

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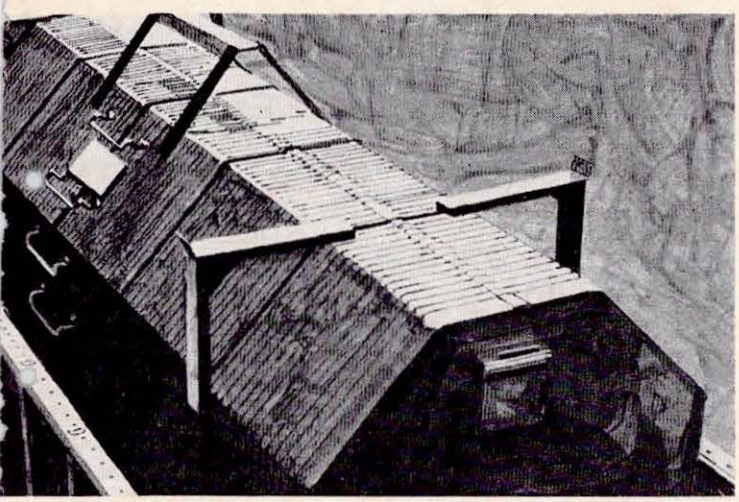

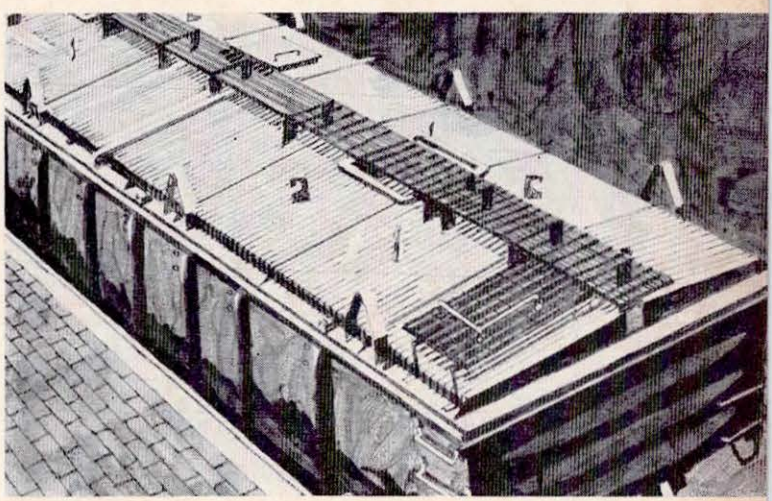

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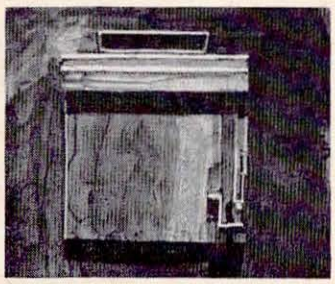

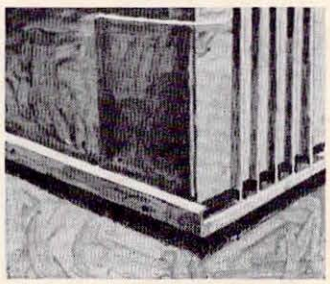

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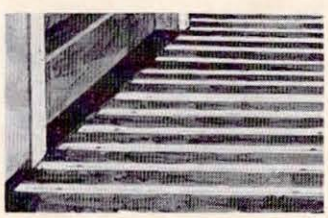

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# "Beyond Aristotle but pre-Newton"

**That's the state of transportation knowledge today, in the view of A. Scheffer Lang. He aired his views at a recent TRF forum.**

A minor bombshell was tossed into the meeting of the Transportation Research Forum at the Mark Hopkins Hotel, San Francisco, Dec. 27-29. Calling attention to the theme of the meeting—"Transportation, an Emerging Science"—A. Scheffer Lang, deputy undersecretary, Department of Commerce, stated flatly that, in his opinion, there is no such thing as transportation science.

Lang said that what the group talked about and worked with was largely not science at all but rather an application of science. "No one phenomenon or set of related phenomena characterize transportation," he stated, "nor can a common set of techniques be applied to transportation. Our problem is not one of explaining phenomena as science does. We must leave that to the physical and social scientists—our job is the application of scientific discovery to our industry."

● **The biggest need.** Lang pointed out that the data most needed in the transportation industry are not data that explain phenomena, but rather data that have an application to the solution of transportation problems. He described the present state of transportation knowledge as being somewhat beyond Aristotle but still pre-Newton in its state of development.

In the rebuttal from the floor, the gist of the disagreement was that transportation involves every scientific discipline represented in the most comprehensive of university catalogues. Also, it was said that the practice of transportation science involves amalgamation of myriad disciplines—sufficient to assure that the output of any given effort in the field of transportation science is comprehensive, meaningful and reasonably in accord with the facts of life as they exist in the transport sector of the economy.

Papers in a session on "Transportation Science—Overview" were presented by Aaron Gellman, vice president-planning, North American Car Co., and Marvin Manheim of the Massachusetts Institute of Technology. Gellman maintained that the first order of business in transportation science should be the development of improved cost models and especially "the substitution of an enlightened mechanism for such rigid cost formulas as the notorious 'Rail Form A'" (the ICC's breakdown formula for determining rail service costs). He claimed that there is no one at the ICC, for example "who is capable of understanding the relatively sophisticated modern cost techniques."

Manheim's paper discussed the advisability of setting up a set of principles for transportation systems analysis. The principles would cover urban, megalopolitan and country transportation, as well as strategic mobility. His paper outlined the principles in detail for each of those forms of transportation.

● **The ICC and DOT.** At a luncheon meeting, ICC Chairman William H. Tucker outlined his ideas as to the course to be taken by the Commission now that a Department of Transportation is in existence. He warned that freight car shortages will continue to be acute in 1967. "Our field force," he pointed out, "has been reduced by 83 positions as the result of the transfer of the Commission's safety responsibility to the new Department. Although these people were primarily engaged in safety duties, they were available for car inspection service when freight car shortages reached crisis proportions and their loss in this area will be severely felt."

Tucker assured his audience that, in the area of car shortages, the ICC will use its powers to the fullest extent. In many cases, he said, individual commissioners will be called on to employ first-hand direction of measures to alleviate car shortages in various regions.

"The creation of the Department of Transportation will enhance the fundamental role of the ICC and place new emphasis on its historic function as an economic regulator," Tucker said. "Federal agencies have usually intervened in ICC cases, for example, on the relatively narrow basis of their own purchases of transportation. Hopefully, the new department, as the designated spokesman of the executive branch will bring before the ICC, in an advocacy posture, a balanced position on behalf of all interested federal agencies."

Tucker added that cooperative efforts between the new department and the ICC will extend over such broad areas as research, enforcement and even policy regulation and will be conducive to a truly unified approach to transportation problems. He also predicted that, to an even greater degree, the ICC would become "an arm of Congress" now that it has been relieved of administering certain policies and that the ICC will submit numerous legislative proposals to the 90th Congress.

● **Handling mergers.** "The Commission will continue to spend a great deal of time considering rail merger proposals," Tucker said. "In this area, the challenge includes matters of procedure as well as substance. We must devise merger techniques that will strike a proper balance between the parties' right to present their evidence and their concomitant right to a determination within a reasonable time. We must continue to develop methods which will enable us to cope with the complexities which are sure to arise. We cannot accomplish this alone. Of necessity, an increased burden will be placed on the parties to assist in expediting these proceedings.

"In other fields, the present law is not sufficiently flexible to allow the Commission to deal adequately with the broader issues presented by contemporary proposals to eliminate passenger service. At present we can do no more than to allow or disallow the discontinuance of specific trains. Moreover, the 4-month time limit is entirely insufficient today when we can be faced with the question of whether to allow discontinuance of all or at least a major portion of rail passenger service."

● **Demonstration projects.** William L. Hooper of the Office of Science and Technology, executive office of the President, stated that transportation demonstrations on a large scale are important for the future of transportation. Uncertain estimates of systems performance and consumer response make such demonstrations and large scale experimentation mandatory when major system changes are contemplated. He cited the possibility of increased government interest in worthwhile transportation demonstrations, even if these should prove costly.

Edward J. Ward of the Office of High Speed Ground Transportation reported on the progress being made by that organization. Much attention is being given to new methods of tunneling, he said, since the rising cost of land has already placed the cost of surface routes above that of tunneling in urban areas. Tube vehicles, either traveling on wheels or aerodynamically

supported, are getting much attention, Ward added, and a volume of knowledge as to proposed new motors is also being acquired.

• **Predicting the market.** Paul H. Banner, director of market research, Southern, described the possibilities of demand models for predicting transportation demand in a manner far more sophisticated than is presently possible. He predicted that the coming years will bring improved input-output models from which over-all demands for transportation may be measured with reasonable accuracy for planning purposes and also, hopefully, to serve as a basis for decision-making.

Ben Alexander of the Defense Research Corp. urged that the problems of urban transportation be tackled in some manner, even if in the present "foggy state" of knowledge of future trends, accurate solutions to all problems are not possible. He used the analogy of the procedures of the Defense Department in the missile-deterrent program, where the future is equally amorphous, to indicate that some action was necessary, even if it did not solve everything.

F. Wascoe, manager, bureau of transportation research, Southern Pacific, presented a historical study of institutional constraints on transportation alternatives so far as transcontinental canned goods are concerned. Herbert E. Bixler, vice president, Systems Analysis and Research Corp., portrayed the dilemma facing regulators of transportation in a resume of an exhaustive study published by the Department of Commerce.

He went on to say: "The fact is that great unused capacity continues to characterize the rail plant and its utilization continues to challenge the allocation of resources. One way in which the country can benefit from lower cost transportation resulting from such improved utilization is to follow in all minimum rate making the procedure used by the ICC when unregulated competition exists. Such procedure would encourage the making of minimum rates based on marginal cost plus whatever increment demand will allow, automatically limited by prices of competitive modes."

Col. David Hammond, director of development and operations of the Bay Area Rapid Transit, invited the audience to a comprehensive tour of BART facilities. He said that 34 miles of the proposed 75-mile system are now under construction, involving $250 million in contracts.

The engineering and design of equipment is now 60% complete and is scheduled to be entirely completed by the end of 1967. ■

LUTHER MILLER

# AS THE EDITOR SEES IT...

**AN INNOVATOR'S CREED**—"If you had to write a single New Year's resolution for the railroad industry, in 25 words or less," a poll-taker asked us the other day, "what would it be?" Swallowing some uncharitable comments about poll-takers, we groped about for a minute and finally proposed a one-worder: "Change."

A document subsequently received from the New York Foreign Freight Forwarders and Brokers Association, Inc., made us wish we had used up those 24 extra words, and a few more to boot. Because it included the most piercingly appropriate resolution, for this or any year, that any railroader could wish for (or nervously shy away from).

The Freight Forwarders and Brokers wanted to let us know that on Jan. 25 Alfred E. Perlman will be honored as the association's Man of the Year—a distinction earned by the highly successful anti-poverty program Mr. Perlman has conducted for New York Central shareholders since he came charging out of the West 13 years ago.

The association offered a long list of achievements that can be credited to this restless and energetic railroader—but suggested that they were all best summed up in Mr. Perlman's own words:

"After you've done a thing the same way for two years, look it over carefully; after five years, look at it with suspicion; after ten years, throw it away and start all over."

In a word—change. Verb, transitive.

**BIG NEWS (AGAIN) AT PROMONTORY**—May 10, 1869, was a great day at Promontory, Utah, and May 10, 1969, promises to be even greater, hallelujah-chorus-wise. Utah's Golden Spike Centennial Commission has been working since 1965 on plans for a re-enactment ceremony commemorating the forging of America's east-west railroad link, and there will be attendant celebrations across the land.

Railway Age will devote an entire issue to the Golden Spike Centennial, and we suspect that a few hundred thousand words marking the occasion will also see print elsewhere.

How did editors a century ago regard this event?

**'YOU OUGHT TO KNOW . . .'**—The May 15, 1869, issue of the American Railroad Journal led off with a lengthy tirade on the under-utilization of U.S. railways (British railways were then hauling five times as much bulk tonnage as their counterparts across the Atlantic); reported that April 1869 earnings of the Pittsburgh, Fort Wayne & Chicago Railway were down seriously from a year ago (the railway earned only $338,346.38 on gross revenues of $729,775.85); gave 15 lines to a description, on page 23, of the Patent Forged Crucible Cast Steel Reversible Frog, manufactured by the Messrs. Armstrong & Co. of Rotherham, England; and then, on the same page, gave 13 lines to the goings-on the previous week at Promontory—about the space (and prominence) that we would devote today to a "You Ought to Know" item. But what the writer lacked in space, he made up in passion. Here, in its entirety, is the American Railroad Journal's report on the driving of the Golden Spike:

"The last rail connecting the Central and Union Pacific Railroads was laid with imposing ceremony at Promontory Point, Utah, on Monday, the 10th inst., making, with the existing roads, a continuous line of railway from the Atlantic to the Pacific. The event was celebrated by jubilant demonstrations in various cities of the Union. All things considered this enterprise may justly be regarded as the great accomplishment of the age—magnificent in its conception, wonderful in its rapid progress, and destined in its beneficent influences, to be one of the great civilizing and commercial levers of the world."

A good lesson, at least, in succinct and accurate journalism.

George W. Moyar
Brenco

Jack W. Miller, Jr.
Brenco

Ralph H. Schafer
Camel Sales

W. W. Parks
Vapor

Wm. G. Heiner Jr.
Edgewater Steel

Barrie T. Smith
L. B. Foster

## SUPPLY TRADE

**George W. Moyar** has been elected chief executive officer, **Brenco, Incorporated,** Petersburg, Va., in addition to his duties as president. He succeeds **George W. Whitfield,** who will continue as chairman of the board.

**Jack W. Miller, Jr.,** sales engineer, **Brenco, Incorporated,** Petersburg, Va., has been promoted to general sales manager. **Hugh M. Smith,** sales engineer, has been promoted to district sales manager, Philadelphia.

**Ralph H. Schafer,** vice president, **Camel Sales Co.,** Cleveland, Ohio, has been elected president. **Richard F. Nogal,** assistant vice president, elected vice president.

**W. W. Parks,** chief engineer, **Vapor Corp.,** has been appointed general manager, Railroad and Transit Division, Chicago.

**William G. Heiner, Jr.,** assistant general sales manager, **Edgewater Steel Co.,** Pittsburgh, Pa., has been appointed general sales manager. Mr. Heiner recently succeeded the late **Walter M. Cree** as corporate secretary and he will continue those duties. **R. Gilmore Snively,** assistant sales manager—industrial products, has been named manager of industrial sales.

**Barrie T. Smith** has been appointed advertising manager for **L. B. Foster Co.** at Pittsburgh, Pa. Mr. Smith was formerly manager, marketing communications, **Union Switch & Signal Division** of **Westinghouse Air Brake Co.** at Swissvale, Pa.

**Jimmy Lee Yowell** has been named sales representative in the newly opened office of **L. B. Foster Co.** in Seattle, Wash.

**James Woodburn** has been elected a corporate vice president of **AMSTED Industries,** with headquarters at Chicago. In addition to his new duties, Mr. Woodburn will continue to serve as president of the **AMSTED Research Laboratories,** Bensenville, Ill.

**L. F. Koci** named to the new position of locomotive development engineer, **Electro-Motive Division** of **General Motors. H. A. Marta** appointed truck and underframe design engineer. **J. J. Kotlin** appointed assistant chief engine design engineer. **H. C. Lafferty,** engine development engineer, assumed the engine development projects, formerly assigned to Mr. Kotlin.

**Edmund M. Grant III** has formed **Granco Incorporated,** to represent manufacturers of railroad equipment and supplies in the promotion and sale of their products. Mr. Grant will serve as president of the new company, which has its headquarters at Chicago.

**Murdock M. Rand,** director of marketing, **Carbon Products Division, Union Carbide Corp.,** New York, has been appointed vice president—marketing.

**Charles Fontaine** has been promoted to assistant sales manager, **Dura-Wood Flooring Division, E. L. Bruce Co.,** Memphis, Tenn.

**Robert A. Hitch,** internationally recognized authority on containerization, has been appointed vice president—engineering, **Strick Corp.,** Fairless Hills, Pa.

**William Burney Thomas** has been elected vice president of **A. Stucki Co.,** Pittsburgh manufacturer of freight car side bearings. Mr. Thomas was formerly general manager of the firm.

**James E. Cathcart** has been appointed manager, planning and development, **Pullman-Standard Division** of **Pullman Incorporated.**

**R. L. Hanes,** vice president—sales, **CF&I Steel Corp.,** Denver, Colo., has been elected vice president—commercial, a new corporate position. **J. N. Counter,** vice president—Western Sales, has been elected vice president—sales. **Mallory L. Miller,** assistant sales manager, Southwestern Division, has been appointed manager of sales of that division, succeeding **Charles F. Lanter,** retired. **Joe A. Bole,** assistant to vice president—Western Sales, has been named general manager of sales—Western Division, remaining at Denver.

**Grant H. Arrasmith** has been appointed assistant to vice president—engineering, Railroad Products Division of **Abex Corp.,** New York. **Erwin R. Knauer,** assistant chief engineer, brake shoe products, succeeds Mr. Arrasmith as chief engineer, brake shoe products. **J. Robert Lottes,** brake shoe project engineer, succeeds Mr. Knauer.

**J. J. Kennedy,** vice president of sales, **Safety Electrical Equipment Corp.,** New Haven, Conn., has been elected chairman of the board. **Harry S. Clarke,** sales manager traction drives, has been elected vice president of marketing. **Charles W. McElroy,** assistant sales manager, has been elected director of sales.

**William J. Somerville,** assistant sales director, Railcar Division, **Evans Products Co.,** has been named regional sales representative, Railroad Division, **Whitehead & Kales Co.,** Detroit.

**Chauncey J. Krout** has been appointed representative, **T-Z Co., Inc.,** Franklin Park, Ill. He will cover the northeastern part of the country.

**Owen Buscho,** manager industrial sales, **Fairmont Railway Motors, Inc.,** named domestic sales manager, effective Jan. 1, to replace **Kenneth Cavins,** retired. **N. J. McDonald,** assistant chief engineer, advanced to chief engineer, effective the same date, succeeding **Ira Sublett,** retired.

**Sheldon Kaplan,** corporate vice president, **Evans Products Co.,** has been appointed general manager of the Transportation Equipment Group. **John Smoter** named divisional vice president. **Arthur B. Bjork** appointed manager of the Plymouth, Mich., rail car plant. **Robert M. Raymond** has been named a vice president of Evans' subsidiary, **United States Railway Equipment Co.,** and **John Phillips** named assistant to the vice president of manufacturing.

## OBITUARY

**William T. Carey,** 67, retired director of sales, transportation finishes, **Pittsburgh Plate Glass Co.,** died Dec. 14 at St. Francis Hospital, Pittsburgh, Pa.


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# Labor-cost problems

*(Continued from page 72)*

arbitration law. In all of this, it also has to be remembered that President Johnson did speak out against that kind of management-labor crisis that affects the public welfare. Last year, apparently, Congress was waiting for the President to follow up his comment with a proposal. No proposal came. But now there's a different Congress—and one that may decide not to wait, given the reason and the opportunity to act on its own.

The labor press seems to regard this Congress as potentially if not actually hostile. It seems to fear what may be done in management-labor legislation. Thus far, however, material which has been put out by the labor press for union members has emphasized only what Congress might do—not what the organizations themselves might do to deserve it.

● **Who does the job?** And this brings up an interesting point: Who's now speaking for the real interest of the people who work for railroads? Is it the brotherhoods? Or is it management, odd as the thought might be? Or is it a bit of both, logical as this theory should be?

The brotherhoods—some of them—are doing an excellent job for the people they represent. The 22.8% increase in total labor cost per employee since 1961 helps to confirm this—and the increase in absolute wage payments since '61 tends to add weight. Further, several organizations—the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors & Brakemen and the Switchmen's Union of North America—are working toward a merger which will, if it's finally approved, cut representation costs and bring into being a substantial, stronger union in the place of three organizations with quite a number of individual problems.

As some see it, however, there are also organizations which appear to exist for the sake of organization, or for the sake of *the* organization. And there may be room for wonderment as to why there hasn't been a more general merger movement among railroad unions—of which there are now two dozen or so.

This rather nastily-phrased question, however—the question of who's now speaking for the real interest of the people who work for railroads—leads to certain assessments and a certain kind of conclusion. And the conclu-


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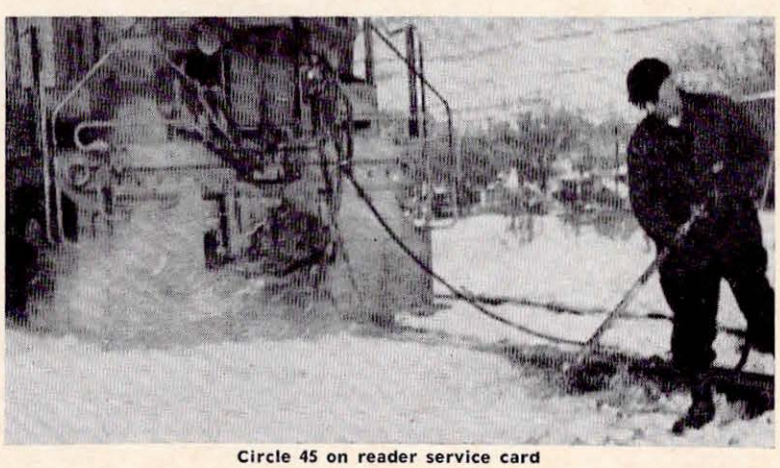

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sion, simply stated, is that railroads have—as perhaps never before—the opportunity to let railroad people feel that they're a part of the enterprise, that it's a growing enterprise and that they grow best who grow as the business grows.

• **Trouble on top.** This is not to say that rail unions are fading out. Quite the contrary is true, or should be—because most observers would argue that a strong union (strong in all senses) makes a significant contribution toward the creation of a strong industry.

The point really is that union leadership, in some instances, is in trouble. It needs help, even as the industry needs help. There is, as one top railroad officer recently put it, "something viciously destructive about the too-readily-accepted idea that all wage-earners are 'entitled' to a wage increase every time January 1 rolls around." There is also something destructive in the idea that "bargaining" means that "we demand and you give." Perhaps worst of all, there is something destructive in the kind of pressures from below which demand that union leaders (a) top every gain with something more or (b) risk defeat by ballot.

Right now, railroad employee morale ought to be high. Railroads are among the growth industries again, and they're likely to stay there for a while. Railroad wages and benefits are good—among the best for many people, and for others they're going to get better because railroads know full well they have to pay to keep the skilled tradesmen they need.

• **To talk or not to.** The problem is that nobody seems to be doing the full job of pointing out these various plus-factors. Railroad men tend to shy away from overly ebullient comments on the way things are going—partly out of fear that the unions will say "Aha! We want ours." "And union officers—though they may know different and want things different—haven't been able to find a satisfactory way to tell the members that they really don't have it so bad.

Both railroad officers and union officers are well aware that their interests are similar far more often than not. But it's a good bet that both will suffer unless somehow the more-more-more pressures from the rank-and-file can be toned down. Management will be under almost continuous fire to boost wages, improve benefits; union negotiators will continue to be saddled with "programs" on which they can't possibly deliver.

The current round of wage talks offers a fine example. The organizations loudly proclaimed that they were going after 18%, 20%, 25%. One union's demands, granted in their entirety, could have brought increases of 100% or more for some employees.

So several of the biggest unions settled for 5%—and at the same time swept the table clean of remaining demands, including certain proposals from management which union strategists looked upon with some apprehension.

Those who took the 5% had sound reasons for doing so—even though the membership may not fully understand.

• **Worthy? Hopefully.** In any event, 1967—the year of the squeeze—will be putting severe enough pressures on both management and union leadership without borrowing trouble in the form of stubborn adherence to impossible demands. The cost problem will be a problem to carriers and brothers alike—which brings to mind again the quotation which opened this commentary: "The laborer is worthy of his hire." The Apostle Paul is credited with having said it first—and today, management people and union leaders might add a second line: "He'd better be." ■


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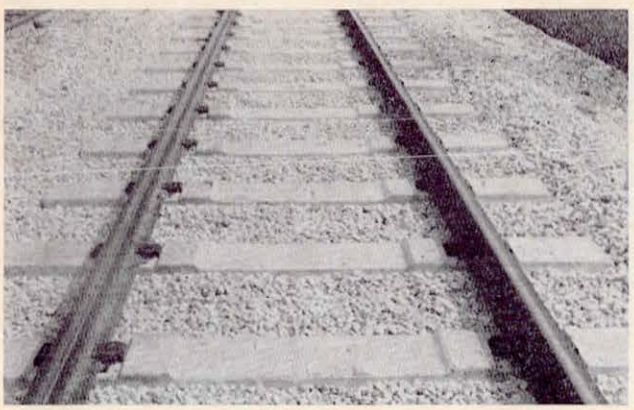

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ATA

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# PEOPLE

**AMERICAN TRANSIT ASSOCIATION.** — **Robert Sloan** appointed executive vice president, Washington, D.C. (RA, Dec. 12, 1966, p. 52). He had been acting as executive vice president since Sept. 15, when **John C. Kohl** resigned from that post. Mr. Sloan, a veteran of 34 years in the transit industry, joined ATA in Jan. 1963 as general secretary. ATA headquarters were moved from New York to Washington during 1966.

**ASSOCIATION OF AMERICAN RAILROADS.**—**David W. Benton,** assistant to chairman, Car Service Division, Chicago, retired Dec. 31, after 50 years in the railroad industry. **Herman P. Kappel,** assistant to manager, Closed Car Section, Car Service Division, Washington, D.C., succeeds Mr. Benton at Chicago.

**ATLANTA & WEST POINT—WESTERN OF ALABAMA—GEORGIA.**—**J. E. MacCarthy,** general auditor, Atlanta, Ga., appointed comptroller there.

**Edwin R. Blake** and **Ron F. Hawkins** appointed general agents at Winston-Salem, N.C., and Memphis, Tenn., respectively.

**ATLANTIC COAST LINE.**—**Marshall C. Jennette,** president and general manager, **Jacksonville Terminal,** Jacksonville, Fla., appointed general superintendent—terminals there for the ACL.

**D. B. Brown, Jr.,** appointed staff assistant to vice president—operations, Jacksonville.

**BALTIMORE & OHIO.**—**E. A. Frazier,** trainmaster, Chillicothe, Ohio, appointed assistant superintendent, Newark, Ohio, succeeding **Samuel C. Myers,** promoted to superintendent at Covington, Ky. (RA, Nov. 28, p. 60). **F. R. France** succeeds Mr. Frazier at Chillicothe.

**BOSTON & MAINE.**—**C. P. O'Rourke, Jr.,** sales manager, freight sales office, New York, appointed assistant vice president—sales, Boston, Mass. **Martial R. Lemay,** regional sales manager, Manchester, N.H., succeeds Mr. O'Rourke at New York.

**William A. Kirk,** director of real estate and industrial development, Boston, appointed vice president—real estate and industrial development.

**CANADIAN PACIFIC.**—**A. B. W. Smart** appointed to treasurer, Montreal, succeeding **C. G. Ralph,** who retired Nov. 30, 1966, after 48 years of service.

**CHESAPEAKE & OHIO—BALTIMORE & OHIO.**—General master mechanics named: **J. F. Finnegan,** Northern Region, Grand Rapids,


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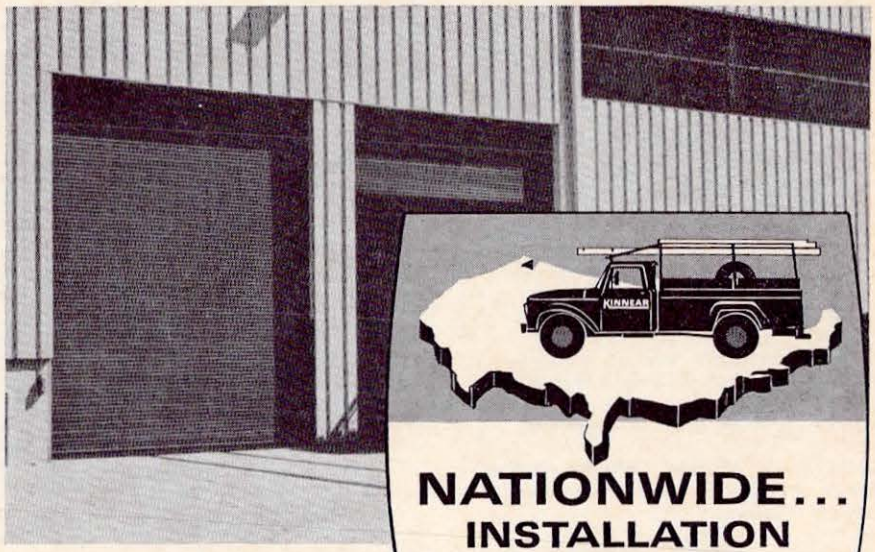


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Carl F. Ramsey
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Leonard Ronis
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William White
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F. C. Dumaine, Jr.
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John P. Hiltz, Jr.
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Mich.; **J. A. F. Craig,** Central Region, Pittsburgh, Pa.; **E. V. Price,** Western Region, Cincinnati, Ohio.

Other recent appointments *At Baltimore, Md.*—**J. J. Ekin, Jr.,** superintendent marine and pier maintenance.

*At Newport News, Va.*—**W. M. Wright,** superintendent marine equipment.

*At Huntington, W. Va.*—**R. H. Smith,** superintendent locomotive shops and pier maintenance; **H. C. Eck,** general supervisor locomotive operations; **L. H. Booth,** superintendent motive power; **H. E. Budden,** superintendent electrical design; **A. O. Ballinger,** electrical engineer fixed property; **R. S. Davis,** electrical engineer equipment; **C. F. Slack,** supervisor passenger car maintenance, succeeding **C. N. Hammond, Jr.**

**CHICAGO & WESTERN INDIANA.—Robert E. Dowdy,** superintendent, elected president and general manager.

**CLEVELAND TRANSIT SERVICE. — Carl F. Ramsey,** superintendent of equipment, promoted to manager of maintenance and acting general manager in the absence of **E. C. Krueger.** Mr. Krueger became general manager last August, succeeding **Donald C. Hyde,** retired. **Leonard Ronis** promoted to manager of operations and will continue most of his duties as personnel director. **Ray F. Booth,** superintendent of purchasing and stores, named superintendent of equipment. **Robert T. Pollock,** manager of operations, left that post on Dec. 31 to become president of the **W. C. Gilman Co.,** transit consultants.

**DELAWARE & HUDSON.—William White,** chairman of the board and president, D&H Co., and chairman of the board, D&H Railroad, retired Jan. 1, but remains a member of the boards of both companies. **Frederic C. Dumaine, Jr.,** elected chairman of the board, D&H Co. **John P. Hiltz, Jr.,** elected president and chief executive officer, D&H Co., in addition to his present duties as president, general manager and as such, chief executive officer of the railroad.

Mr. White began his railroad career in 1913 as a clerk with the Erie at New York. He later served as vice president and general manager of the Virginian (now Norfolk & Western) at Norfolk, Va.; president and member of the Board of Managers, Lackawanna; president, New York Central System, and president and chairman of the board, D&H. In 1963 Mr. White took on additional duties as chairman, Erie Lackawanna.

Mr. Dumaine is president of Amoskeag Corp., the largest owner of D&H shares. He was president, **New Haven,** from 1951 to 1954.

**DENVER & RIO GRANDE WESTERN.—Frank E. Long,** general passenger agent, Denver, Colo., promoted to passenger traffic manager, succeeding **Harold F. Eno,** who retired Dec. 31, after more than 45 years of service.

**DETROIT, TOLEDO & IRONTON.—Richard B. Wright,** Detroit sales manager, **Pennsylvania,** elected vice president of traffic, DT&I, succeeding **E. A. Walther** who retired due to poor health.


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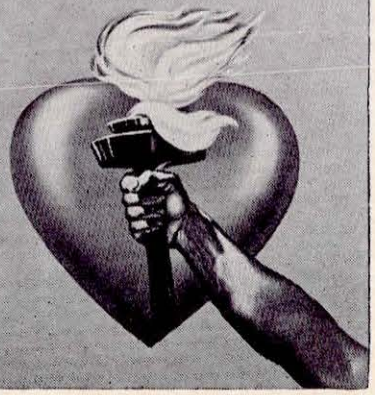

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E-L

Paul W. Johnston, Jr.
E-L

H. L. Garringer
Frisco

John W. Demcoe
GTW

Otto H. Zimmerman
IC

W. A. Johnston, Jr.
IC

**ERIE LACKAWANNA.—Eugene S. Root** elected vice president—comptroller, Cleveland, Ohio. Mr. Root has been comptroller since merger of the Erie and Lackawanna in 1960.

**Paul W. Johnston, Jr.**, director of piggyback, Cleveland, appointed assistant vice president—piggyback.

**FRISCO.—H. L. Garringer,** administrative assistant, Springfield, Mo., appointed assistant to vice president-operations there, succeeding **H. B. Stierwalt,** who retired Dec. 31 after more than 48 years' service.

**GRAND TRUNK WESTERN.—John W. Demcoe** appointed vice president and general manager, Detroit, Mich., succeeding **Harry A. Sanders,** who retired Dec. 31. Mr. Demcoe was formerly vice president, transportation and maintenance, **Canadian National,** Montreal.

**Michael A. Prus,** claim agent, general claims department, Detroit, named general claims agent there, succeeding **Thomas O. Leveille,** retired.

**ILLINOIS CENTRAL.—Otto H. Zimmerman,** vice president operations, Chicago, named vice president and general manager. **Wayne A. Johnston, Jr.,** assistant vice president operations, appointed assistant vice president passenger operations. **Edward H. Buelow,** general manager, Chicago, appointed assistant vice president wood products, Jackson, Miss. **Jack E. Andrews,** coal traffic manager, named manager freight sales, Chicago. **Henry F. Davenport,** superintendent, New Orleans, named general superintendent, Chicago. **Herbert L. Williams,** general superintendent of transportation, advanced to manager of transportation. **Arthur M. Dickerson,** assistant superintendent of transportation, named assistant manager of transportation. **Robert O. Bodell,** superintendent, Chicago Division, appointed assistant to general manager, in charge of yard and terminal studies aimed at expediting the flow of freight traffic. **James F. Reents,** staff assistant—operations, named assistant to general manager, specializing in the operations aspect of merger studies. **Donald R. Steward,** contract agent, advanced to assistant to general manager—contracts.

An organization staff has been formed to implement IC's Mid-America Information Network. Head of the new staff, which is divided in four sections, is **Richard P. de Camara,** vice president, information and control systems. **George Pipas,** general superintendent of communications and signals, named director of communications. **L. E. Johnson,** director of machine procedures, becomes director of data processing. **W. H. Thompson** appointed director of data control, and **Arthur K. McKechnie,** director of methods systems design and programming. Mr. Thompson was formerly assistant to the vice president, **Louisville & Nashville,** and Mr. McKechnie was manager of systems design and application, L&N.

**L. J. Waltemade** named labor relations staff officer, Chicago.

**LOUISVILLE & NASHVILLE.—C. Hayden Edwards,** secretary and general attorney, Louisville, Ky., elected secretary and treasurer, to suc-


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C. Hayden Edwards
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Raymond E. Bisha
L&N

Robert P. Ethridge
L&N

John D. Morris
PRR

J. W. Diffenderfer
PRR

ceed **W. Andrew Coe,** treasurer, who retired Dec. 31 after more than 46 years of service.

**Raymond E. Bisha,** assistant vice president-operation, elected general manager. In the past the L&N has had a general manager, but in recent years these duties have been performed by the vice president—operations.

**Harold W. Henderson,** assistant to general counsel, appointed assistant to vice president. **Marvin D. Jones,** assistant general attorney, appointed general attorney. **Eugene W. Herde,** assistant to general attorney, and **Eaton E. Randles,** attorney, appointed assistant general attorneys.

**Robert P. Ethridge,** general passenger agent, appointed passenger traffic manager, succeeding **Joseph W. Moore,** who retired Dec. 31 after more than 47 years with the L&N. **William J. Bowling,** assistant general passenger agent, named general passenger agent —rates.

**F. J. Bantle,** division freight agent, St. Louis, appointed to the newly created post of manager, traffic data systems, Louisville. **R. G. McGee,** general agent, Chicago, succeeds Mr. Bantle at St. Louis.

**C. Norman Beasley** named advertising manager, Louisville.

**Robert H. Martin,** general agent, Louisville, named division freight agent there. **I. W. King,** manager-car utilization, appointed assistant chief transportation officer-planning and procedures, Louisville. **H. K. Ferguson,** assistant superintendent, Nashville Division and Terminal, Radnor, Tenn., named director of transportation planning and procedures, Louisville. **L. D. Macon,** manager, data control, Louisville, named assistant superintendent, Nashville, replacing Mr. Ferguson.

**PENNSYLVANIA.—John D. Morris,** assistant vice president, special services, appointed vice president, special services, Philadelphia. **James W. Diffenderfer,** director of special services, succeeds Mr. Morris. The special services department is responsible, among other things, for development of the PRR's new high-speed passenger service between New York and Washington in cooperation with the U.S. Department of Commerce.

**Walter K. Howard** appointed assistant vice president and sales manager, Detroit, succeeding **Richard B. Wright,** appointed vice president—traffic, **Detroit, Toledo & Ironton.** Mr. Howard has been closely associated with transportation of new automobiles in his capacity as manager of freight rates at Philadelphia.

**Basil Cole,** director, labor relations and personnel, promoted to assistant vice president—administration, on the staff of the chairman of the board.

**Charles E. Ingersoll,** assistant vice president —staff, named assistant vice president, passenger service contracts, on the staff of the president.

*(Continued on page 132)*

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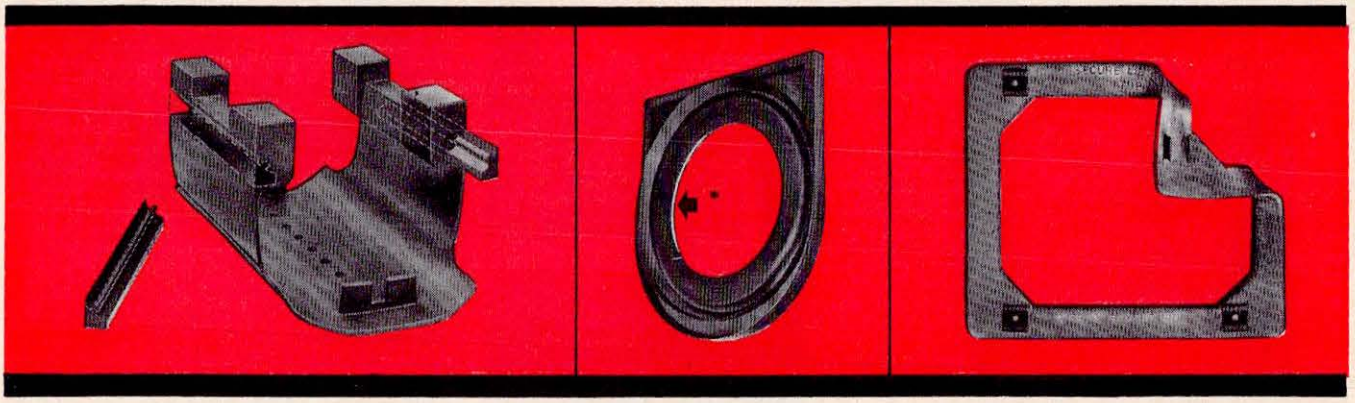

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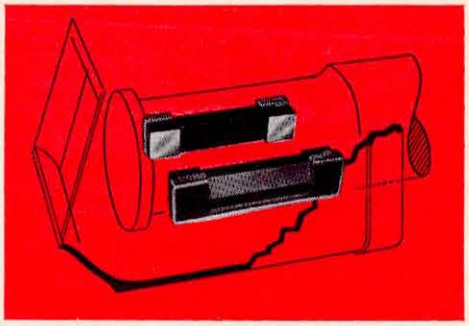
The "SECURE" Journal Box Lid Seal, Designed to Seal with *All* Journal Box Lids.

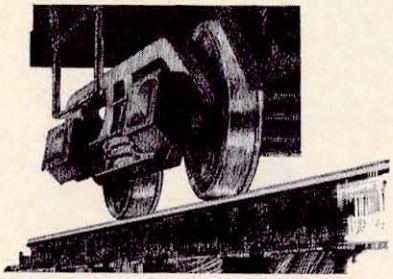
## Journal Stops, Rear Seals, Lid Seals and Lubricators—All AAR Approved—All from ONE SOURCE!

The purchaser has the option of using either PREMIER or ATLAS Lubricators to complete the UNITY service proven package.

With the purchase of the complete package—UNITY offers a *liberal discount* on ALL items.



Type "W" Journal Stop, Double and Single Contact, for Welded Installation.



For Complete Details—Write of Phone

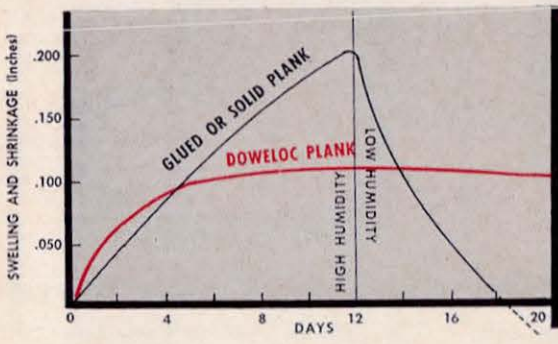
Unity RAILWAY SUPPLY CO., INC.

200 South Michigan Avenue • Chicago, Illinois 60604 • Telephone: HA 7-4626

Circle 52 on reader service card

# Greater Stability

## than any box car decking on today's market!




### A CURVE AND A NOTEWORTHY EXCERPT:

"In our extensive tests on Doweloc, (Project G-27) we are pleased to report its exceptionally fine performance. One of its greatest advantages is dimensional stability. In a test where 20% moisture content was developed and thereafter allowed to dry to 8%, the shrinkage across a 6" piece was found to be negligible — *only 1/100th inch.* The curve illustrates expansion and contraction of a glued or solid plank compared to your product. The outstanding stability of Doweloc is evident."

TIMBER ENGINEERING COMPANY • WASHINGTON 6, D.C.

**20,756,830 SQ. FT. IN SERVICE**

*as of November 1, 1966*

*Doweloc is the only laminated, edge-grain, tongue-and-groove plank locked by aluminum dowels for minimum expansion and contraction.*

# DOWELOC® *Engineered* DECKING

DOWELOC DIVISION—D.B.FRAMPTON & COMPANY
Huntington Bank Bldg. • Columbus, Ohio 43215

Circle 53 on reader service card

Walter K. Howard
PRR

Basil Cole
PRR

Charles E. Ingersoll
PRR

Albert R. Marsh
PRR

**Albert R. Marsh,** regional mechanical officer, Eastern Region, Philadelphia, appointed to the new position of production control manager, Altoona Works operations. **James F. Roseman,** assistant superintendent, heavy repair shops, Altoona, succeeds Mr. Marsh at Philadelphia. **J. P. Masterson,** assistant superintendent motive power, Pittsburgh Division, appointed to the new post of regional road foreman of engines, Central Region, Pittsburgh. Mr. Masterson has been succeeded by **J. A. Park,** who advances from assistant superintendent motive power, Buffalo, N.Y.

**Harold S. Jensen** has joined the PRR as director of real estate—special projects. He formerly was executive vice president of The Lumberman's Co., a real estate development firm in Austin, Tex.

**Paul N. Mansfield,** chief of personnel, **Lehigh Valley,** Bethlehem, Pa., appointed assistant manager of labor relations, PRR, Philadelphia, succeeding **S. Lincoln Zane,** who retired Dec. 30, after more than 48 years with the PRR.

Four members of the PRR's legal staff promoted from assistant general counsel to general attorneys: **Carl Helmetag, Jr.** (competitive transportation); **Edwin K. Taylor** (corporate law); **Richard N. Clattenburg** (labor law); and **David L. Wilson** (corporate law).

## OBITUARY

**Harry F. Doyle,** freight traffic manager—freight sales and service, **Erie Lackawanna,** New York, died Dec. 19.

**Gerald D. Finney,** 51, general attorney, **Association of American Railroads,** died Dec. 28 at his home in Alexandria, Va.

**Wilfred McN. Knapp,** 83, who retired in 1954 as vice president, **Central of Georgia,** died of a heart attack at his home in Savannah, Ga., on Dec. 24.

**Joseph B. Rollheiser,** 74, retired assistant personnel manager, **Santa Fe,** died Dec. 21 in South Shore Hospital, Chicago.

# this is the modern approach to a complete railroad speed control system

## VAPOR SPEED-LOG

**The Speed-Log speed control system is as modern as today's computers — from the computer-type, easy-to-read digital speed indicator to the latest in completely solid state circuits. This modern approach gives:**

**ACCURACY** — To 1/10 mph. This means precise throttle control of speed.

**READABILITY** — Positive, clear-at-a-glance, easy to see. This means less chance for reading error.

**STABILITY** — Constant, waver-free read-out at all speeds. This means steady read-outs, even in acceleration and very low speeds.

**NO MECHANICAL CONNECTIONS** — This means you save installation money.

### WHAT IS SPEED-LOG?

The Speed-Log is a complete speed control system. Its many options let you decide exactly what you need for your locomotive. The digital read-out is available in two ranges: Normal 0-99 mph and High 0-199 mph.

Where a greater degree of control is required, the Automatic Range Changer on the two digit read-out allows accurate readings in tenths up to 9.9 mph. This dual range option is completely automatic and requires no manual switching. Also available are an accurate overspeed control and a 15,000 mile speed/event recorder.

For all its sophistication, the Speed-Log is easy to install and just as easy to order (see how at bottom of page). Components are installed where you want them. A magnetic pick-up and solid state control circuit translate wheel rotation into a positive read-out. Wheel wear adjustments are made quickly and easily with the twist of a dial. The overspeed and 1/10 mph options are built into the control circuit while the recorder can be plugged-in when needed.

Go ahead, now is the time to design your Speed-Log speed control system. Your Vapor representative will help you . . . and ask him about the "creep control" for hump service.

### HOW TO ORDER:

1. Specify speed system ☐ Normal 0-99 mph ☐ High 0-199 mph
2. Specify controls ☐ basic ☐ overspeed ☐ Auto. range change ☐ overspeed/auto. range change
3. Specify read-out mount ☐ console ☐ panel
4. Optional speed/event recorder ☐ required. ☐ not required.

All systems are 74 VDC (36 VDC available on special reqeust).

**SPECIFY: VAPOR SPEED-LOG SPEED CONTROL SYSTEM**

Speed-Log is a trademark of Vapor Corporation

VAPOR®

**VAPOR CORPORATION**

6420 WEST HOWARD STREET • CHICAGO, ILLINOIS 60648

an AMERCON company

Circle 58 on reader service card

# NEW EQUIPCO FULLOAD CAR HANDLES 56-PALLET / 105,000 LB. LOAD

*Earns railroad 40% additional revenue on very first trip!*

Partially-loaded FULLOAD Car is inspected by a portion of crowd witnessing initial loading at Corn Products plant in Argo, Ill. Inset shows lift truck operator inserting 56th pallet (each unit 52″ x 42″, with overhang) into 50′ Equipco FULLOAD Car.

**Loading of record Corn Products shipment (Mazola) is completed easily and rapidly. Arrives at destination with zero damage!**

In its maiden venture, Equipco's new FULLOAD concept has demonstrated a unique ability to provide considerably higher payloads for the railroad . . . while, at the same time, affording big shipper savings.

In its first outing, the 50′ Equipco car was loaded by Corn Products with 2,800 cases (56 pallets/105,000 lbs.) of Mazola Oil. This is 40% more than the normal 2,000-case Mazola load (40 pallets/75,000 lbs.).

Yet the loading itself—witnessed by railroaders, shippers and press—was accomplished rapidly and with extreme ease. And the shipment, leaving from Argo, Ill., arrived at its Ridgefield, N.J. destination with no damage whatever!

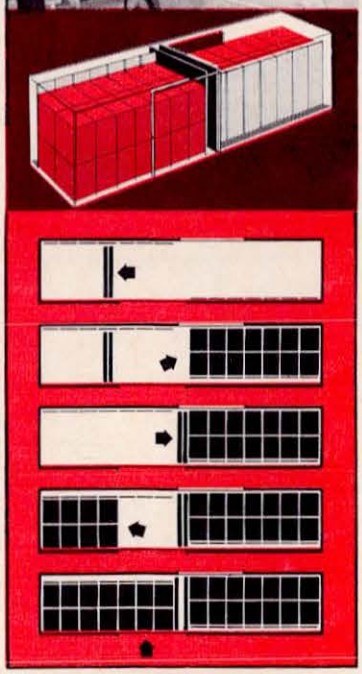
From the railroad viewpoint, the freight bill on the FULLOAD shipment amounted to $813.75. Freight bill on the normal Mazola load has been $581.25. Thus the additional revenue to the railroad was $232.50 . . . on a single one-way shipment!

The secret of this increased payload capacity rests in the special design and construction of Equipco's FULLOAD Car itself. As seen in the schematic drawing at right, the new FULLOAD Car embodies three unique characteristics:

The first of these is the use of Equipco's unique AUTO-LOK Load Dividers . . . which can be operated from *outside* the car as well as inside and offer the added benefit of complete automatic locking. Second is the use of Equipco's longitudinally adjustable Side Filler (8-PL). Third is the use of oversized doors (12′6″), located in a specific staggered position.

In addition to assuring complete support of lading (particularly in the doorway area), the Equipco FULLOAD system affords important time savings. As seen by the diagrams at right, loading operations are simple, positive . . . and fully mechanized. There is no need for hand-loading of any kind . . . even in the critical doorway area.

**Send today** for free illustrated brochure describing how the Equipco FULLOAD concept delivers major benefits to railroads and shippers alike. Write Equipment Specialties Division, UNARCO INDUSTRIES, Inc., 104 South Michigan Avenue, Chicago, Illinois 60603.



Equipco

EQUIPMENT SPECIALTIES DIVISION
104 South Michigan Avenue · Chicago, Illinois 60603

UNARCO INDUSTRIES Inc.

Circle 54 on reader service card

# MARKET OUTLOOK

## Carloadings

Loadings of revenue freight in the week ended Jan. 7 totaled 451,457 cars, the Association of American Railroads announced on Jan. 12. This was an increase of 35,813 cars, or 8.6%, compared with the previous week; a decrease of 56,825 cars, or 11.2%, compared with the corresponding week last year; and a decrease of 79,601 cars, or 15%, compared with the equivalent 1965 week. Ton-miles generated by carloadings in the week ended Jan. 7 are estimated at 11.7 billion, a decrease of 9.1% compared with the corresponding week of 1966, and 6.5% below the 1965 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Jan. 7

| District | 1967 | 1966 | 1965 |
|---|---|---|---|
| Eastern, including Allegheny and Pocahontas .. | 176,601 | 209,181 | 215,220 |
| Southern ..... | 98,888 | 106,970 | 114,834 |
| Total Eastern and Southern Districts ..... | 275,489 | 316,151 | 330,054 |
| Northwestern . | 51,751 | 51,998 | 55,665 |
| Central Western | 92,567 | 103,689 | 109,254 |
| Southwestern . | 31,656 | 36,444 | 36,085 |
| Total Western Districts .... | 175,968 | 192,131 | 201,004 |
| Total All Roads | 451,457 | 508,282 | 531,058 |
| Commodities: | | | |
| Grain and Grain products .... | 45,028 | 55,762 | 51,886 |
| Livestock ..... | 1,340 | 1,492 | 2,281 |
| Coal ..... | 96,971 | 107,736 | 106,539 |
| Coke ..... | 7,158 | 8,138 | 9,575 |
| Forest Products | 29,645 | 32,327 | 35,848 |
| Ore ..... | 15,381 | 17,202 | 16,761 |
| Merchandise l.c.l. | 4,500 | 6,318 | 9,170 |
| Miscellaneous . | 251,434 | 279,307 | 298,998 |
| | 451,457 | 508,282 | 531,058 |

**PIGGYBACK CARLOADINGS.** — U.S. piggyback loadings for the week ended Dec. 31 totaled 16,946 cars, carrying 27,282 trailers, compared with 15,994 cars, carrying 25,978 trailers, in the corresponding 1965 week. Loadings for 1966 up to Dec. 31 totaled 1,162,731 cars, carrying 1,912,161 trailers, compared with 1,034,377 cars, carrying 1,669,881 trailers, in the corresponding period of 1965.

**IN CANADA**—Carloadings for the seven-day period ended Dec. 21 totaled 74,911 cars, compared with 73,258 for the previous seven-day period, according to the Dominion Bureau of Statistics.

| | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|---|---|---|
| Totals for Canada | | |
| Dec. 21, 1966.... | 74,911 | 26,367 |
| Dec. 21, 1965.... | 76,634 | 22,627 |
| Cumulative Totals | | |
| Dec. 21, 1966.... | 3,952,649 | 1,228,347 |
| Dec. 21, 1965.... | 3,887,198 | 1,218,873 |

## FREIGHT TRAIN CARS

► *Illinois Central.*—Will build 1,000 70-ton pulpwood cars at its Centralia, Ill., shops at a cost of approximately $8 million. Completion is scheduled for April. IC's total freight-car program for 1967 calls for acquisition of 4,575 cars of various types at a cost of $52 million.

► *Southern Pacific.*—Is acquiring 300 Center Flow dry-bulk commodity cars from ACF at a cost of approximately $5 million. SP and its St. Louis Southwestern Lines (Cotton Belt) will each receive 100 100-ton, 4,650-cu-ft-capacity cars, equipped with three elongated loading hatches and three gravity-pneumatic unloading systems. The remaining 100 cars of the order are for the Cotton Belt, and will be 100-ton, 5,250-cu-ft-capacity. Half of these cars are being equipped with four combination gravity-pneumatic outlets, and half with four adjustable-pneumatic outlets. Each has eight 20-inch loading hatches.

► *December Bad Order Ratio 0.9% Lower Than Previous Year.*—Class I roads on Dec. 1 owned 1,491,389 freight cars, 3,033 less than on Dec. 1, 1965, according to AAR report summarized below. Bad Order Ratio was 0.9% lower than on Dec. 1, 1965.

| | Dec. 1, 1966 | Dec. 1, 1965 | Change |
|---|---|---|---|
| Car ownership ..... | 1,491,389 | 1,488,356 | +3,033 |
| Waiting repair ..... | 70,836 | 83,521 | —12,685 |
| Repair ratio ..... | 4.7% | 5.6% | —0.9% |

## PASSENGER CARS

► *Manitou & Pike's Peak.*—Ordered two additional diesel-electric rack railcars from Swiss Locomotive & Machine Works, Winterthur, Switzerland.

## NEW FACILITIES

► *Pennsylvania.*—Extending Captina branch 4½ miles in the Ohio River valley at a cost of $4½ million to tap undeveloped coal reserves.

► *Rio Grande.*—Budgeted $3.9 million for improvements to fixed plant in 1967. The road will install new 136-pound rail in 16 miles of main-line track and 112-pound relay rail in 20 miles of branch and secondary track at a cost of $1.5 million. Also scheduled are installation of CTC between Pueblo and Salida, Colo., at a cost of $1.3 million; various communications and signal improvements; purchase of new M/W equipment; upgrading of a number of bridges and trestles; and the concrete lining of five tunnels.

## FOREIGN

► *Pakistan Western Railway.*—Ordered 20 2,600-hp diesel-electric locomotives from Alco at a cost of $4.6 million. Delivery is scheduled for early 1967. The new order, financed by the Agency for International Development, will increase to 286 the number of Alco diesels in West Pakistan.

► *Zambia:* General Electric will begin, this month, to deliver to Zambia 26 U20C diesel-electric locomotives rated at 2150 gross and 2000 net hp. The radio-equipped units will be provided with inter-truck control.

# YOU OUGHT TO KNOW

**C&NW plus DM&CI:** Chicago & North Western's pursuit of its strong-regional-railroad philosophy gained momentum with agreement to purchase 99.6% of the capital stock of Des Moines & Central Iowa for $5.1 million. DM&CI owns 83.1% of the stock of Fort Dodge, Des Moines & Southern; together, the two roads operate about 132 miles of main line, with principal terminals at Des Moines, Boone and Fort Dodge, Iowa. DM&CI revenues, for the 1961-65 period, averaged $2.7 million annually but the road incurred an average net loss of $122,000 annually. Net benefits from C&NW control of the smaller property are estimated at more than $2 million per year. DM&CI's principal stockholders and North Western's directors have approved the purchase agreement, and ICC approval "will be sought promptly."

**Hearing set in N&W case:** The ICC will hold oral argument April 14 on the question of including Erie Lackawanna, Delaware & Hudson and Boston & Maine in the present Norfolk & Western system. The Commission has received from Commissioner Charles A. Webb a report recommending that N&W be required to include E-L and D&H, and that it be permitted but not be required to include B&M. The time for filing exceptions to the Webb report has been extended to Mar. 1. Replies to exceptions will now be due April 1.

**Century No. 500 for Alco:** A 3,000-hp Century 630 locomotive delivered to the Pennsylvania during the Christmas holidays was the 500th Century-series unit turned out by Alco. Charles C. Davis, president of Alco's locomotive and engine products division, said the Century locomotives, introduced in January 1963, are now in use on more than 30 railroads. The company makes nine models of the Century.

**ICC Committee named:** Members of the ICC's Policy and Planning Committee who will continue the practice of identifying basic policy problems within the Commission, and formulating plans for their solution, have been appointed. For 1967 the committee consists of Commissioners Virginia Mae Brown, chairman, Charles A. Webb, and Willard Deason. ICC Chairman William A. Tucker said that 1967 projects of the committee will include a study of the small shipment situation and problems arising in connection with maintaining adequate service for such shipments.

**Give 'em credit:** The bank credit card plan is spreading to railroads. Santa Fe, which has been honoring Rail Travel Credit Cards and has had its own go-now, pay-later plan, will now accept BankAmericards and Midwest Bank Cards (of which there are several). Says President John S. Reed: "This move will simplify purchase of rail transportation by credit card, especially for those who desire extended payments. . . .We're trying to make rail travel attractive to the widest possible market."

**Passengers on flatcars:** A project to transport motorists in their automobiles on flatcars over the Atlantic Coast Line and Richmond, Fredericksburg & Potomac mainline between Jacksonville, Fla., and Washington, D.C., will be sponsored by the Department of Commerce. This was revealed at last week's meeting of the Midwest High Speed Rail Transit Conference by Dr. Robert Nelson, director of the Office of High Speed Ground Transportation. He said the 758-mile trip would be made in eleven hours.

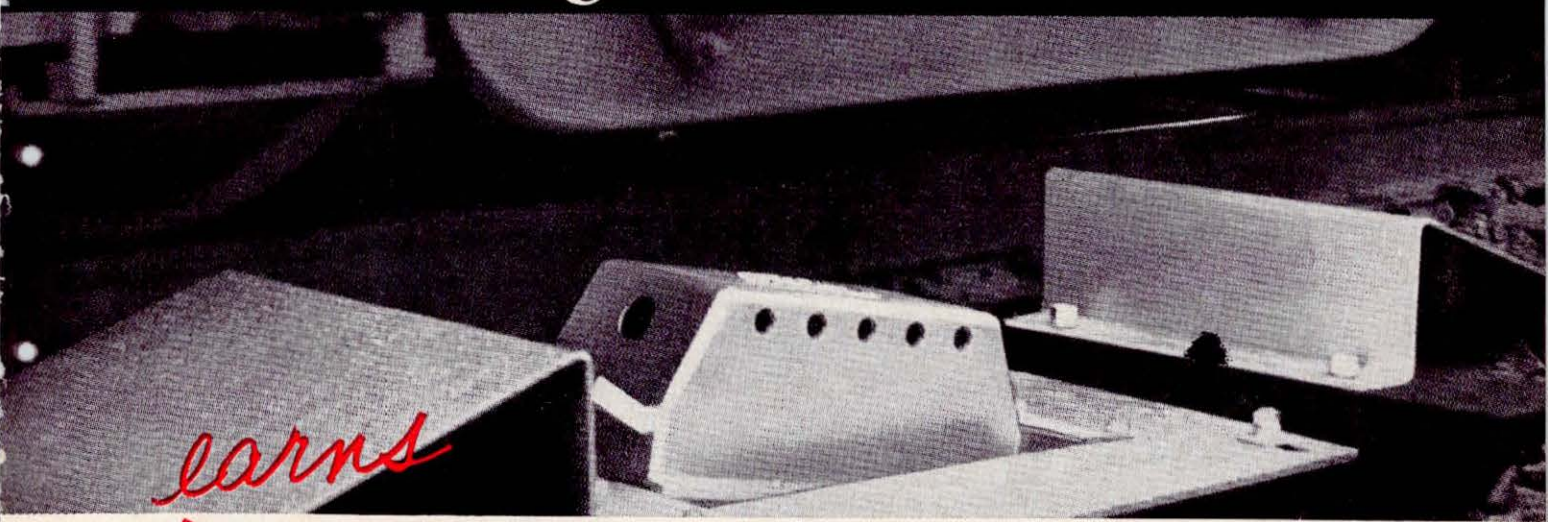
**Train-off petitions filed:** Six money-losing passenger trains will be dropped by the Chesapeake & Ohio-Baltimore & Ohio if the Interstate Commerce Commission approves a petition submitted by the railroads. Among the trains that would be affected are the C&O's famed "FFV" and the "Sportsman" on the Washington-Cincinnati route. The other runs involved are between Portsmouth and Charlottesville, Va., and between Ashland, Ky., and Toledo, Ohio.

**Truck tonnage:** Intercity truck tonnage in the week ended Dec. 31 was 18.1% below the previous week and 6.4% below volume in the corresponding week of 1965, according to American Trucking Associations.

## Current statistics

| | |
|---|---|
| **Net Income** | |
| 9 mos., 1966 | $658,000,000 |
| 9 mos., 1965 | 542,000,000 |
| **Carloadings, revenue freight** | |
| 1 wk., 1967 | 451,457 |
| 1 wk., 1966 | 508,282 |
| **Freight cars on order** | |
| Dec. 1, 1966 | 56,437 |
| Dec. 1, 1965 | 42,089 |
| **Freight cars delivered** | |
| 11 mos., 1966 | 81,849 |
| 11 mos., 1965 | 70,110 |
| **Serviceable cars** | |
| Dec. 1, 1966 | 1,420,553 |
| Dec. 1, 1965 | 1,397,160 |

# How a servosafe® hot box detective system



earns ~~saves~~ money

The Servosafe® Hot Box Detective System spots hot journal bearings before they become critical—so you can do something about it.

That means money, because it means less car shopwork (experience with the Servosafe system shows that only one out of ten abnormal journals spotted needs a wheel set replacement) . . . and less equipment out of service. The system warns you in time to prevent an axle burnoff. That's when you really save money—by avoiding a derailment and eliminating damages to right-of-way, equipment and lading.

After all, a serious derailment may amount to more than 20 times the cost of a Servosafe system.

For a brochure on the Servosafe Hot Box Detective Systems and all available components, write to:

servo corporation of america

servo

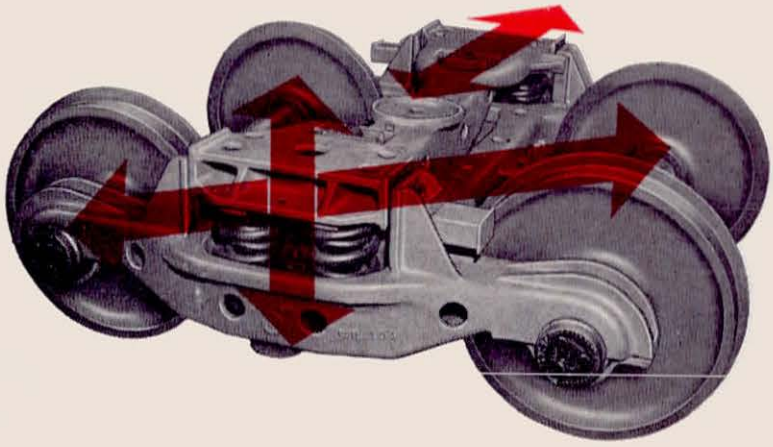
railroad products division
111 new south road
hicksville, l.i., new york 11802
516 938-9700

Circle 55 on reader service card

## not one...not two

# but three-dimensional cushioning

## in the Rockwell Express Truck



## are your cars cushioned vertically and laterally?

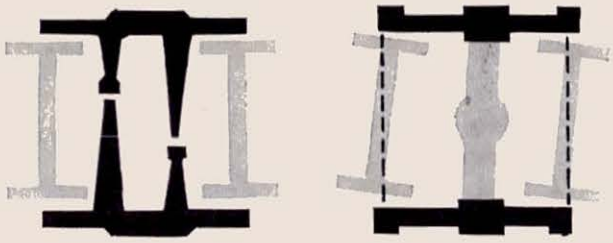
Significant reductions in damage to lading and equipment have been achieved by the use of cushioning devices in freight cars. However, these devices cushion only in the longitudinal direction. Damage *also* occurs because of vertical and lateral forces. Conventional freight car trucks provide little or no cushioning against vertical and lateral forces.

The Rockwell Express truck is designed to protect your equipment and your lading by providing:

1. **A SOFTER, EQUALIZED VERTICAL RIDE.** Diagonally-spaced spherical bearings in the transoms permit individual vertical displacements of each wheel with a minimum of wheel load transfer. Bolster springs are designed to provide a softer ride under all load conditions for the specific application involved. Vertical displacements and motions are controlled by a guided, spring-loaded, asbestos-phenolic snubber.

2. **AN EXCELLENT LATERAL RIDE.** The suspension design permits 1⅜" lateral displacement – *four times* that of the conventional freight car truck – with fewer wear points. The bolster spring design and snubbing arrangement converts this displacement into an easy, controlled lateral ride. Higher, wider spring location reduces sway and roll. Journal bearing design provides additional lateral, as well as vertical, cushioning.

3. **RIGID TRAM.** The ability of a truck to stay in tram significantly affects the ride and lading protection it provides. The unique Rockwell design features transoms integrally cast in side frames to form a rigid, horizontal frame, preventing the truck from skewing. This also reduces wear, which maintains ride qualities throughout the life of the truck. An important side benefit of this feature is the reduction in wheel wear.



**Your premium car equipment and fragile lading deserve the three-dimensional cushioning of the Rockwell Express truck.**

**A TRIAL CAN GIVE YOU EVIDENCE** of the superior performance of the Rockwell Express truck. Arrangements for a trial carset can be easily made. Just call or write for details.

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15—125-T 1000 HP Baldwin Road Switchers, late model
6—125-T 1600 HP Fairbanks-Morse Rd Switchers, late model

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1—25-T Link-Belt, 50 ft boom

**Striegel Supply & Equipment Corp.**
**6001 Chemical Road**
**Baltimore, Md. 21226**

**JAN. 16**

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**CIRCULATION DEPT.**
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# VIEWPOINT

# Play it close – or go for broke?

Eleven-and-a-half months from now, we'll be welcoming 1968. All the questions about 1967—and there are many—will have been answered. And railroads will have a much clearer idea than they do today as to the long-term prospects of the industry.

A key question on '67, as many see it, is one that can be answered with a simple percentage figure—the figure which tells how much of the nation's intercity freight business went by rail.

You can make a good case for the pre-eminence of certain other figures—net income, return on investment, capital spending, labor cost. But virtually every individual yardstick on railroad performance can be related, one way or another, to that share-of-the-business figure. On its rise or fall may the real, long-term success of railroad effort be measured.

At first glance, insistence on this improvement in competitive standing might seem to be unnecessary. Railroads did set an all-time traffic record last year. They spent more money than ever before for capital improvements. They boosted net income to near-record levels. And they did it all without disturbing, to any meaningful extent, the balance which has existed since the start of the decade among the various modes of transportation. Railroads had 44% of the traffic in 1960, and their share hasn't varied by more than a fraction of 1% in any year since then.

Obviously, the industry could go on indefinitely, showing traffic-volume gains without making competitive gains, so long as the total market expands. This kind of rather passive growth, however, isn't the goal of the activists running today's railroads. As Pullman-Standard's George Green puts it, "If you know anything about these new railroad leaders, then you realize that their goal is to increase their share [of total business]."

## Incentive—and opportunity

This year, '67, is a vital one. Railroads come into it with both the incentives and the opportunities to make significant competitive gains.

Incentives? Labor costs may go up sharply. Revenue increases may not match cost increases. Slowdowns in some sections of the economy may bring lean times for those who count on a bigger pie automatically bringing a bigger slice. Pressures for upward rate adjustments are becoming harder to resist.

Opportunities? Seldom if ever have railroads gone into a new year better equipped for competitive combat. And seldom if ever has the main competitor, the trucking industry, seemed more off-balance.

Within a matter of days, negotiations will be under way between the truckers and the powerful Teamsters organization. At this point, predictions are risky. Nobody knows at what speed the talks may move, or what course they'll take. If talks drag on, it's conceivable that a new head-man may be running the negotiating show for the union before settlement-time. About the only safe forecast on the bargaining is that it will result in a substantial increase in industry labor costs, and this will mean more trouble for the truckers.

## Bigger share for rails?

If railroads are in a not-so-good position to absorb increased wage-benefit costs, motor carriers are in a not-at-all-good position to do so. The spread between income and outgo in the trucking industry is paper-thin. Almost inevitably, whatever the Teamsters get will have to be made up by a rate increase—and a rate increase of any magnitude for the motor carriers almost inevitably will produce new competitive opportunity for railroads.

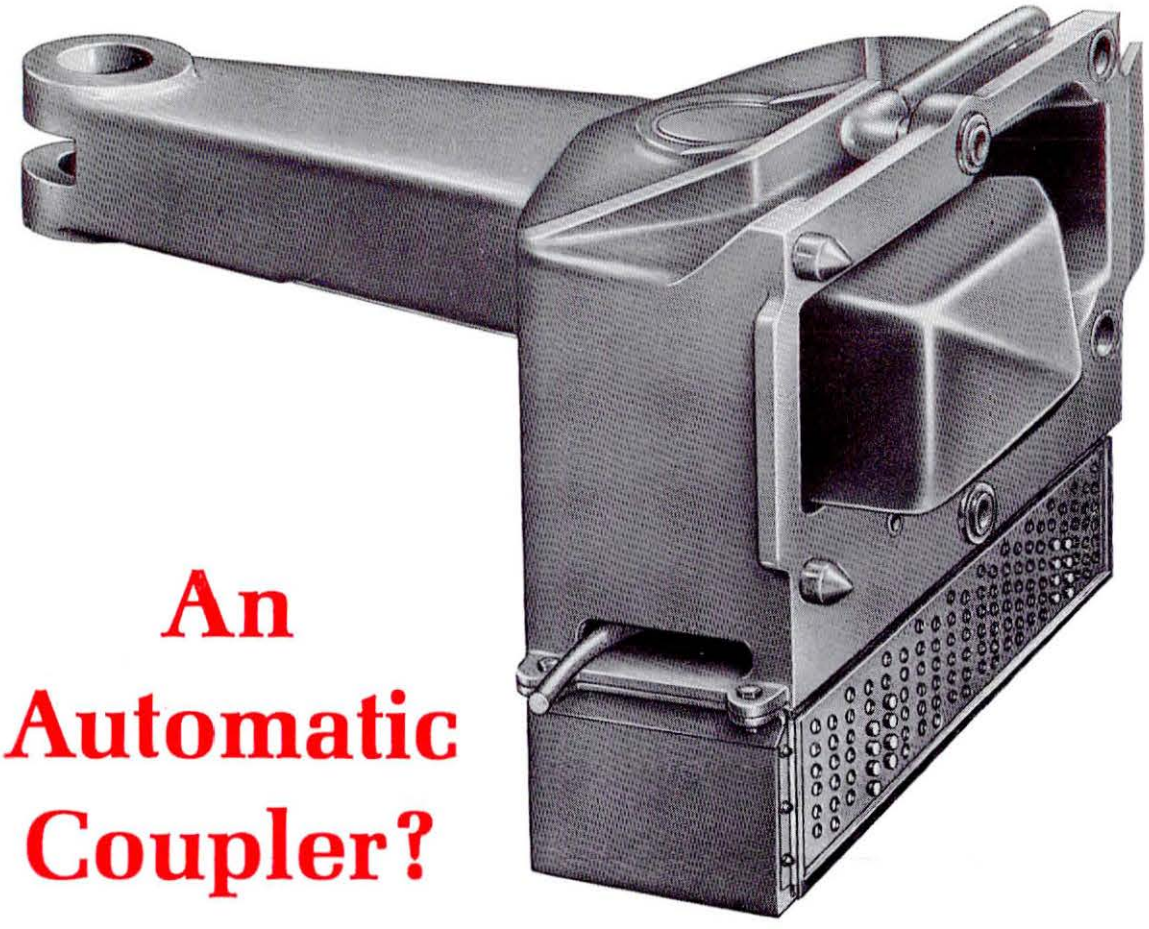
So the new year shapes up as one in which the railroad industry will have powerful reasons for trying to slice off a bigger share of the market—and better-than-average opportunities for doing it.

What happens now depends on many factors—but none will be more important than the initiative of the men who make up railroad management.

There are some who will play '67 conservatively, consolidating past gains, putting the main emphasis on internal efficiencies and cost-cutting. Others will go for the big gain, seeking out areas of possible traffic advantage and then trying to move in big.

There's much to be said for the conservative approach. History honors the tortoise as often as it honors the hare. Still, there's a feeling that railroads are heading into a year of tremendous opportunity—and that the industry had better answer the knock.

Many new competitive tools are available now to railroads—new equipment, new services, new marketing ideas. Union Pacific's Edd Bailey puts it all in context, in one succinct comment: "How we use these tools and continue to show our ability to move into other areas of innovation will indicate whether or not the future of transportation belongs to the railroads."



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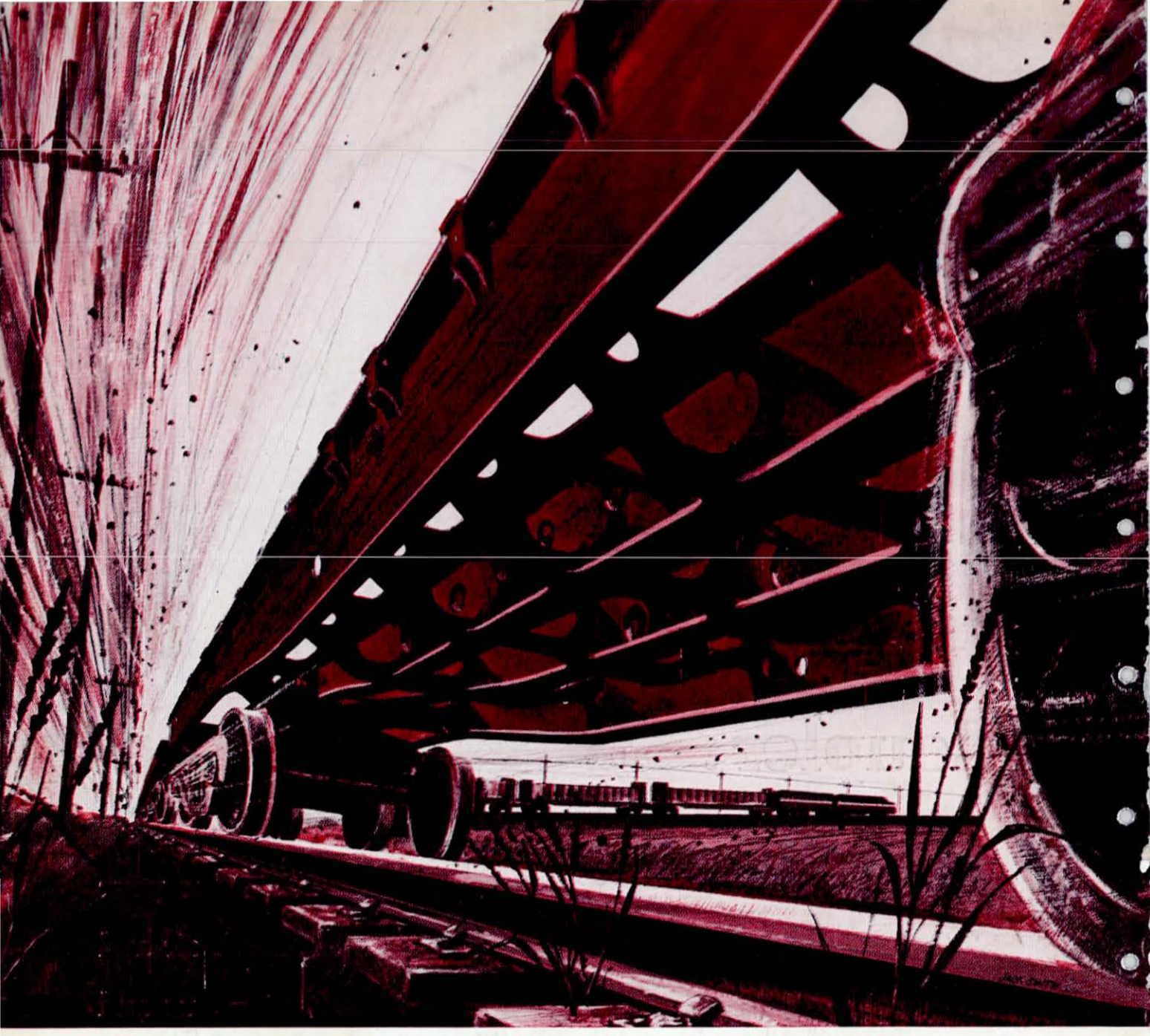

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